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HOTBEDS AT LITTLE COST

ARE INVALUABLE ADJUNCT TO VEGETABLE GROWING, SAYS AHEARN

Enable Gardener to Grow Long Season Crops and Also to Start Early Truck—Pit Method of Construction Is Serviceable

A hotbed of sufficient size for ordinary use may be simply and easily constructed without any great outlay of money, according to M. F. Ahearn, associate professor of horticulture in the Kansas State Agricultural college.

"As an adjunct to the growing of vegetables the hotbed is almost invaluable," said Professor Ahearn. "It enables the gardener to grow crops that require a long season to mature, such as tomatoes, celery, peppers, and egg plants. The hotbed also may be used to advantage in starting early cabbage, onion, cucumber, and muskmelon plants."

GOOD DRAINAGE IS NECESSARY

"Hotbeds may be constructed in a number of ways. One of the most common and serviceable is the pit method. The hotbed should be placed on the south side of a building or other good windbreak. Care should be taken that it has good drainage."

"Three feet by six feet is a convenient size for a sash and as many sashes may be used as desired. The frame should be 12 to 15 inches high at the back and eight to 10 inches in front. The sash may be of glass but many persons prefer muslin. Muslin is much superior to the glass if the bed is used for sweet potato plants."

FERMENTATION SUPPLIES HEAT

"The heat for hotbeds is commonly supplied by the fermentation of horse manure. That from highly fed horses is desirable. Straw to the amount of from one-third to one-half of the mixture should be added as the manure will not heat if it is too solid. It should be piled in a long, narrow, square-topped pile, and if very dry should be moistened."

"If the weather is cold and the manure does not ferment readily, add a little hen manure or warm water to one part of the pile. In order to insure uniform fermentation the pile should be turned occasionally and all lumps broken. When the pile is steaming throughout, which is usually in from 10 to 12 days, it is ready for use."

START EARLY IN MARCH

"Dig a pit two to three feet deep, depending on the time of year the bed is to be used, and the same size as the bed desired. For common use, such as growing early tomatoes, radishes, and lettuce, early in March is the time to start the hotbed. Hotbeds prepared after the first week in March should have 18-inch pits."

"Upon the bottom of the pit place a layer of straw or leaves two or three inches deep. Next place a layer of the fermented manure 18 to 20 inches thick. Above this put a layer of loam soil, four to eight inches deep, in which the plants are to be grown."

PERCHERON SALE BEATS AVERAGE FOR 10 YEARS

Event at Agricultural College Proves Highly Successful—Help to Small Breeders

That the annual Kansas Percheron Breeders' sale held at the agricultural college was a success is shown by the fact that 41 head of Percheron horses sold for \$20,630, or an average of \$503.16.

"The prices were better than the average of the Kansas Percheron sales for the last 10 years," commented Dr. C. W. McCampbell, associate professor of animal husbandry.

"The purpose of this sale is to give the small Kansas breeder an opportunity to find a better market for his surplus than he could find at home."

"The average buyer goes to the place where he can have a large number of animals from which to select. He will not take time to visit the small breeders who only have two or three animals to sell."

"When 40 or 50 head owned by small breeders are brought together in a consignment sale, the buyers are attracted from far and near."

Buyers from all sections of Kansas and from seven other states were present at the sale.

The college furnishes its barns and pavilions for the sales, and the services of its men free of charge.

Information relative to the sale next year may be had from Doctor McCampbell.

FEW HOUSE FURNISHINGS ARE BETTER THAN MANY

Simplicity, Neatness, and Sincerity Are the Qualities to Seek, Says Teacher of Home Art

What kind of curtains shall I have for the living room?

What shall be the color of the new wall paper for the dining room?

These are questions that continually confront the housewife and that require care in answering in order that the home may be a harmonious whole. A knowledge of the principles of simplicity, neatness, and sincerity as applied to house furnishings is necessary, according to Miss Grace Averill, assistant in home art in the Kansas State Agricultural college.

"Many persons have the idea that it costs a great deal to furnish a home tastefully but this is not true," said Miss Averill. "A few simple furnishings, moderate in price, that go well together are in better taste than a profusion of costly articles that are unrelated. Having only a few necessary pieces of furniture in a room helps to give an air of spaciousness. This is a valuable principle to follow in furnishing the small house."

"The floor and walls should be finished in neutral tones in order to form a background for the furnishings and also for the persons who will occupy the room."

"It is better, when beginning to buy furniture, to get only two or three chairs of a set having good lines, paying as much as one can afford, than to get a whole set having showy carvings or upholstery. It has been aptly said that quality is remembered when price is forgotten."

Furnishings of a modest home should show no distinct style and only a few pieces should be purchased at a time. The need and fitness of each should be considered. One should not mix styles in furniture, in the opinion of Miss Averill. A chair of the time of Louis XV is out of place among colonial furniture. Having pieces of several styles in the home has a tendency to give the impression of a furniture store or of a museum and to violate the air of homelikeness so necessary to the peace and happiness of dwellings.

When one already has some of the heavy looking mission pieces it is well to use with them a few articles of wicker in the natural finish. Wicker is easy, comfortable, light, and may be found with good lines.

The weight of furniture should be considered by one who does her own work and none selected that is too heavy to move easily.

Honest material, subdued colors, avoiding high polishes, comfort in line, ease in handling and cleaning, are considerations not to be overlooked in furnishing the home.

GERMS LURK IN CRACKS

POORLY CONSTRUCTED KITCHEN FLOOR MAY BREED DISEASE

Narrow Hard Lumber, Cement, or Mosaic Tile Is Desirable Material, Says Architect—Linoleum Is Attractive and Not Extremely Expensive

The rapidly growing science of bacteriology is teaching the housewife that diseases are lurking not only in contaminated food and dirty wash rags, but in the cracks and joints of the poorly constructed kitchen floor, asserts Dr. J. D. Walters, professor of architecture in the Kansas State Agricultural college. With these facts in view the careful housekeeper will not underestimate the importance of a hard and smooth floor.

"A properly constructed kitchen floor is made of narrow, vertical grained, kiln dried, hard pine—southern yellow pine—hard maple, red oak, or white oak," said Doctor Walters.

TAR PAPER REPELS INSECTS

"Flooring lumber is only from one-half to seven-eighths of an inch in thickness, but a good kitchen floor is usually laid on a construction floor of stock boards and underlain by two or three thicknesses of tar paper. Tar paper is better than any other kind because it retains its pungent odor almost indefinitely and thus prevents insects from eating into the wood."

"The finishing floor is laid after the plastering of the house has been completed. The floor is then planed down with a floor planer and given a coat of hot linseed oil applied freely with a mop so that the floor will absorb much of the oil."

TO FINISH KITCHEN FLOOR

"The finishing coat of the average kitchen floor consists of a strong coat of shellac dissolved in methyl alcohol. Shellac varnish will stand much more wear without showing spots than the usual varnishes."

"The finished floor should be gone over from time to time with a rub coat of linseed oil, but this should be applied as lightly as possible so that the floor will not get sticky or have a greasy appearance."

"Considerable time—at least two weeks—should pass between the oiling and the shellacking process. This gives the boards time to dry thoroughly before the application of the shellac varnish."

INSTITUTIONS USE CEMENT

Hotels and hospitals are often finished with cement floors having a thickness of about three inches, pointed out Doctor Walters. The material used consists of one part of fresh Portland cement and not more than two parts of fine sharp river sand.

Kitchen floors in the more expensive homes are often made of mosaic tile. Such floors, well made and placed upon a concrete bed, will last practically as long as any other of the inside finishings.

The cost of mosaic floors ranges from 45 cents to \$1 a square foot, including the border, which is usually made of colored tile. This does not include the cement bed, which costs between 10 and 20 cents a square foot.

WHAT THE LUMBER COSTS

The cost of a pine floor, exclusive of the construction floor, is between four and six cents a square foot, while that of the maple and oak floors ranges between six and 10 cents a square foot.

"A linoleum floor is a thing of beauty and not very costly," commented Doctor Walters. "A 12 by 15 foot kitchen floor can be covered with a first class inlaid linoleum for \$25 or \$30."

"Linoleum is the best material for renovating old worn out kitchen floors. It should wear from five to 12 years, especially if it is given a coat of boiled

linseed oil or shellac every season or two."

"Cheap board floors, besides breeding disease and wearing out the housekeeper, detract from the appearance of the kitchen, which should be most attractive."

THERE'S STILL CHANCE FOR FAIR WHEAT CROP

Favorable Weather Conditions Would Improve Prospects—Soil Blowing in Some Regions

Although the condition of wheat in Kansas is not more than 50 per cent of normal at the present time, there is still a chance—provided weather conditions are favorable—that Kansas will have a fair wheat crop, in the opinion of L. E. Call, professor of agronomy in the Kansas State Agricultural college.

Wheat is dead in some fields, the soft varieties being particularly hard hit, according to Professor Call. While the upper part of the wheat was found to be dead in many instances the crown was still alive. Damage has been done in some sections through soil blowing. The soil is loose, and unless precipitation comes soon, soil blowing may become more general. Moisture is needed in all sections of the state.

WOMAN NO NEW FACTOR IN INDUSTRY OF WORLD

Education for Life in the Home Is of Greatest Importance, Thinks Miss Tarbell

Many persons have the mistaken idea that woman is a new factor in industry, according to Miss Ida M. Tarbell, who spoke before the student assembly Friday morning on "The Girl in Industry."

"The woman has always been on the job," said Miss Tarbell. "Woman was as great a factor in industry 100 years ago as at present. The only difference is in the form of her work. One hundred years ago she did the work in her home that she does in the factory today."

"The change in the form of woman labor has brought up new problems. The health problem is the most serious factor. Under the old conditions in the factories thousands of women were robbed of their health. For many years employers have been under superstition that cheap labor was the most profitable labor. The employers hired girls instead of boys because they would work for a cheaper wage. Managers are now beginning to see that cheap labor is usually not profitable."

"Nothing else is so important as the education of the woman for the home. Woman has one of the most serious economic problems of the country. The solution of the high cost of living is completely within her control. By common consent the wife is the overseer of the pay envelope."

"The average industrial life of the woman is from three to five years. After that period she marries to escape the work in which she is caught. She marries with the idea that she is going to live a life of ease. She makes a failure of married life because she has not had training in meeting the problems of home life."

"These women do not understand the problem of making the home beautiful and pleasant. They see that they are a failure and grow to dislike their work and go back to the factory."

Carl S. Hoar, until recently instructor in botany in the college, now in charge of the department in Williams college, has been appointed instructor in botany for the summer at the Woods Hole (Mass.) Biological station.

FREES TREES FROM PEST

CHARLES A. SCOTT DEVISES METHOD OF PREPARING NURSERY BEDS

Steam Sterilization Will Eliminate Danger of Evergreens Damping Off—Plan Will Mean More Efficient and Ornamental Windbreaks for Kansas

A new method of preparing nursery beds for seeding evergreen trees to eliminate the danger of damping off has been developed at the Kansas State Agricultural college by Charles A. Scott, state forester. In the future it will be possible to grow evergreen trees successfully at a small cost.

The new method used by Professor Scott is a process of steam sterilization of the nursery bed before seeding. Damping off is a fungous disease to which the young trees are susceptible until after three months of age, and it is estimated that barely 25 per cent of the young stock survives the first summer. The sterilization process kills all the fungus spores and weed seeds that are present in the soil. Thus the seedbeds are absolutely free from the deadly fungous disease, as well as weedless during the first summer.

SPORES DIE IN SHORT TIME

Experiments have been tried on several beds to ascertain the length of time necessary to steam the ground in order to kill the spores of damping off, and it has been found that 45 minutes is sufficient to give the best results. In beds that were not treated the trees are puny and the stand is thin, while in the steamed beds the trees are healthy and vigorous and the stand is all that could be desired. In the beds that were treated for less than 45 minutes the condition of the trees and the stand vary according to the length of treatment.

The method of steaming the seedbed is simple. First, the soil is loosened so that the steam may penetrate into the earth, and then a large sheet iron pan is inverted over it and weighted so that the pressure of the steam will not lift the pan. The steam is then turned into the pan from an engine. When the plot has been steamed and the pan removed, the bed is ready to be seeded.

BETTER THAN DECIDUOUS TREES

"There are many reasons why the forestry department of the college sought for new methods of handling the nursery beds of evergreens," said Professor Scott. "The superiority of evergreen trees over the deciduous varieties for windbreaks is conceded by reason of their storm resisting qualities, and because they are much harder than the cottonwood or other trees well known in Kansas."

"The need for better and more ornamental windbreaks in Kansas has become imperative, and the evergreen is the tree which meets the requirements. The demands made upon the forestry department of the college for coniferous trees have been rapidly increasing."

WHAT VARIETIES ARE BEST?

Professor Scott prefers the red cedar, the Chinese arbor vitae, and the Austrian and western yellow pines, as they are better adapted to Kansas than other varieties of evergreens. It is not advisable to plant red cedars around an orchard, for in the spring they sometimes become infested with a fungus called the cedar apple, which will travel to apple trees close at hand. The Chinese arbor vitae and the pines may be planted anywhere and not jeopardize other trees or shrubbery.

Although the evergreens require from three to five years longer to reach a usable size than other trees that are commonly planted in Kansas, they provide a more efficient windbreak or grove. They are far superior for protection and ornamental purposes.

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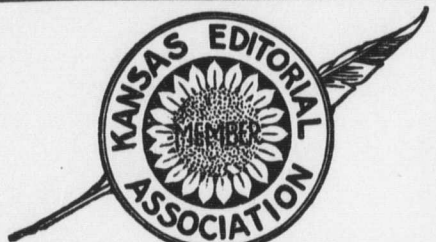
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Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

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WEDNESDAY, FEBRUARY 21, 1917

FOOD, FEED, FERTILITY

Adopted as a slogan in the south, "Food, Feed, Fertility" is a good motto for farming anywhere. Food for people, feed for live stock, fertility for the soil.

This motto means balanced, diversified farming. It means that the farm is to produce, so far as possible, the food used by the persons living on it, that grain and hay crops are to be fed to cattle rather than sold, that the soil is not to be robbed by this generation, leaving nothing for the next. It is a program which may be worked out in details by any intelligent farmer and which will mean money not only to him but to his children and his grandchildren.

A PROFESSION OF SERVICE

Wasn't it Dr. Samuel Johnson who remarked of a noted criminal that he had at one time in his life "descended so low as to edit a newspaper?" Time was when people agreed with Doctor Johnson's attitude toward journalism. That was the time when newspapers either were subservient to a rotten government or else, unwilling to bow to the rulers whom they justly despised, were denied access to adequate sources of information and had to depend on gossip and rumor to fill their columns.

Once in a while, nowadays, some good soul, reborn out of the seventeenth or the eighteenth century, deplores journalism in much the mood of Doctor Johnson. Most people realize, however, that while newspapers and magazines are far from perfect, they have done and are doing an incalculable amount of good that no other agency could do.

Journalists themselves, moreover, are growing prouder and prouder of their profession. In the last 20 years history after history has been published by the older newspapers of the country, detailing the particular accomplishments of these papers in serving the public interest. This year the Hartford (Conn.) Times, celebrating its centenary, has this to say:

"Length is not the true measure of public service. Celebrating the one hundredth anniversary of the establishment of the Times, we should not emphasize the number of its years but for the conviction, shared we hope by its readers, that the years have been fruitful of achievement in the interests of the community it serves. Cynics allege that newspapers are published solely to make money. No newspaper management minimizes the importance of the commercial aspect of its enterprise; but all intelligent newspaper publishers know that a newspaper to survive and prosper, as the Times has survived and prospered for 100 years, must identify itself with movements and with men commanding the confidence of the community. There must

be policies and purposes appealing to the highest class of citizenship to secure in return from that class a moral support upon which must rest any enduring material prosperity."

Even more fruitful in community service will be the future years of newspapers and magazines that—a constantly growing number—aim directly at this ideal. Journalism is a profession of service.

JAPAN AND CORAL

Japan used to export half her annual production of coral. She was paid \$500,000 for it. In Italy there were skilled workmen in coral whose Mediterranean beds had been exhausted. These workmen made coral objects which Italy sold all over the world.

Now Italy and her Italian workmen are busy with war. Japan sees the opportunity of doing the manufacturing herself. The Japanese government is training coral workers. Its representatives are investigating the particular coral objects demanded in western markets. Japan proposes to substitute an export of \$35,000,000 for one of \$500,000.

Japan used to get paid \$12.30 per pound for the coral that she sent to Italy. Now she proposes to get paid for it over \$1,000 per pound, because she proposes to export, along with it, the skilled labor of Japanese workmen. This is skilful exploiting of the resources of Japan. Her coral beds are not unlimited. She proposes to get the maximum price for such of her product as she turns over to other lands.

Japan is pointing the way we must follow. Our future lies in exporting our labor as well as our raw products.—New York Evening Mail.

THE PERFECT GIRL

The following are the attributes of the perfect girl as seen through Harvard eyes, some 50 bachelor graduates having recently, and after considerable discussion, agreed on them for the "girl that's worth while":

She is attractive, graceful and healthy, but not necessarily pretty.

She can dress tastefully and entertain anyone and make him feel at ease.

She can make bread as well as fudge, and cake as well as a "rare-bit."

Her dancing is not necessarily latest, her tennis is not necessarily up to the standard, but she is appreciative of the dance and of the sports.

She is broad minded, sympathetic, tactful, unselfish, optimistic, thrifty, of good disposition, and moderate in all things.

She can stand reverses without worry.

She is gentle to children and kind to older people, especially to her parents.

She has a broad education, but not necessarily a college one.

She is modest and true and home loving.

She has good social standing, is of a religious nature, and is not "too proud to pray."—Baltimore Sun.

CUTTING EXPENSES IN COLLEGE

Two people can live as cheaply as one. For, at the University of Wisconsin, in the case of women students, actual figures show that 12 can live as cheaply as six. Which means, even in these hard times, that you can afford to send both daughters to college instead of one. The secret of the discovery is community life and coöperative housekeeping.

Under this system of scientific management there are three houses being run successfully this year, accommodating in all 42 girls. The first house was started last year by the girls' honorary senior society and proved such a successful experiment that the girls of the senior class of 1916 and the women of the American Collegiate association each furnished a house this year.

The A. C. A. stopped at nothing less in the living room than a gate-leg table, indirect lighting, and upholstering the heavier furniture in a fine domestic tapestry. In such surroundings as these the rooms are \$1.55 a week and board something less than

\$3. The forlorn parlor and dingy room found in the average boarding house for college girls averages \$7 a week.

In the coöperative houses there are no wages to be met for hired help, and there is no landlady trying to lay by for a rich old age. All the work

the latest approved methods" and this in itself is a liberal education, especially for the girl who is looking forward to a home of her own.

The houses are open to all girls on the basis of scholarship and financial need, with a premium put on personality. The houses always number

College Professors' Salaries

Dr. George E. Vincent, President of the University of Minnesota, in the Yale Alumni Weekly

In the *Republic*, after Socrates has divided his citizens into three classes, this question is asked: how make members of these groups contented with their lots? To meet this problem Socrates proposes a "serviceable falsehood." Let them be told a myth: they are all children of a common mother, Earth, but into the making of them different metals have entered. The guardians or philosophers have an element of gold. To these leaders is assigned the task of ruling the city. They are to live at common tables, to forego luxuries, to hold no private property, and to devote themselves unselfishly to the public welfare. When a doubter asks whether these philosophers will be satisfied to serve without the rewards of wealth, Socrates replies: "We shall tell them that they already have gold in their own characters, and hence have no need of mere, sordid metal."

The essential principles of human society do not greatly change. We have been telling our guardians "serviceable falsehoods." We stimulate our teachers and professors by fine phrases; we depict the advantages of training the youthful mind, and extol the satisfaction of quiet, unobtrusive service to society. It is quite astonishing to note how well this plan has succeeded. Even today we are paying college professors too largely in the currency of compliment.

No one seriously believes that men of highest character can be bribed into an academic career. In earlier days religious and institutional loyalty had great influence. Men lived simply, and spent themselves freely for the institutions to which they were pledged. The intellectual satisfactions of scholarship, escape from the competition of commercial life, comradeship with congenial colleagues; the sense of kindling other minds, ideals of intellectual and spiritual progress are the real rewards which today appeal to leaders in the work of higher education.

It is one thing to recognize these leading motives; quite another to regard economic considerations as negligible. If the men who devote themselves to college and university teaching are to do their work well they must be able to count upon incomes which will free them from sordid anxieties and give them opportunities for growth.

The college teacher's professional training grows more and more exacting. He must devote years to study before he becomes a candidate for the higher ranks of service. This implies increased investment in himself before he can hope for satisfying returns. Unless men of real ability can look forward with confidence to receiving adequate incomes they are unlikely to enter the teaching profession. It is essential, therefore, to the recruiting of university faculties that salaries be put upon a higher level.

The college professor occupies in American life a difficult position. By education and tastes he is fitted to associate with people who enjoy much larger incomes, and whose standards of dress, entertainment, and other expenditures are far beyond his reach. It requires philosophy, humor, and the highest breeding to play such a part with dignity and serenity. There is an economic limit below which the professor and his family can hardly hope to achieve this difficult task.

There are austere people who would prescribe for the professor, his wife and his children a regime of simplicity, self-denial, and isolation from the world and all its works. Unfortunately, if the professor is to be a human and genial influence in the class room he needs contact with a wide environment. He must travel; he must escape a narrow provincialism. It is not enough that he be a highly-trained specialist. He should in the best sense be also a man of the world. And this is not to be achieved on the average salary of a railway engineer.

is done by the girls and the college rents the houses to them at the cost of their upkeep.

The lunches and dinners are planned and prepared by two girls who get their board in return. The breakfasts and dishes are taken care of by squads of two girls each. Each squad prepares breakfast—hot cereal, toast, and coffee are the rule—for one week. The house is divided into sections, the squads taking turns looking after them. The work is so arranged that every girl gives about an hour a day to the work of the house.

Chaperoning two of the houses are graduate students in the department of home economics. This means that the work is carried on "according to

some of the most representative girls in college.

Two hundred dollars is the budget which carries them through the year. This allows for board, room, tuition, and books. Four hundred dollars is a low average for outsiders.—E. N. Ayer in the Boston Transcript.

A QUARTER CENTURY AGO

Items from The Industrialist of February 20, 1892

There will be no exercises at the college February 22.

Miss Pearl Dow, '91, assists her father in the Manhattan postoffice.

New eight-day clocks have been put into the printing office and the iron shop.

Doctor Mayo will visit Garden City and Dodge City next week to present papers before farmers' institutes.

John U. Higginbotham, '86, and Miss Bernie Mitchell were married in Chicago Tuesday, February 16.

Assistant Horticulturist Mason was elected president of the Manhattan Horticultural society at the last meeting.

Professor White conducted a general history exercise at the meeting of the Riley County Teachers' association at Leonardville on Saturday last.

Miss Gertrude Coburn and P. S. Creager, '91, write for the current number of the Kansas Capital—the one of "A New Kitchen Tool," the other of "A Hotbed for the Farmer."

C. A. Dow, once a member of the class of '77, is now a prosperous druggist at Bluff City. He was glad to renew old acquaintance through the professors at the institute, and to aid in its success.

Copy is being prepared for the new catalogue, soon to be issued. It will contain a number of new illustrations, among which will be pictures of the vegetable gardens, the college herd, and the interior of the new iron shop.

Professor Hood is developing considerable ability as a financier, having recently bargained for "three hundred dollars' worth of molding patterns for \$7." These patterns will be of great value to the department, since they answer every purpose and save the expense of manufacturing.

G. V. Johnson, '91, made a short call on college friends yesterday afternoon on his return from Kansas City, where he purchased an outfit for a job printing office which he and H. B. Gilstrap, '91, purpose to open in Chandler, Okla., about March 1.

The college representatives at the Bluff City institute enjoyed a brief visit from J. G. Harbord, '86, of the Fifth Cavalry, who is now located at Wichita on recruiting service. Lieutenant Harbord reports himself as ascending in his work and well pleased with military life in general.

The term social last evening was an occasion of much enjoyment and recreation to faculty and students. Entertainment was furnished by the "Peak Sisters," with their abundance of talent. Interspersed with their program, the college orchestra and the cadet band rendered some of their choice selections.

THE BIRDS FLIT UNAFRAID

Herbert Trench in the Westminster Gazette

The birds flit unafraid
Through your great cannonade;
And, O Cannoniers, though ill
The forests take your skill
And as by winter nipped
Scatter leaves bullet-stript
Down the shell-ravaged road—
Still, in its dark abode,
In the branches of God,
The soul sings on alone;
You may blow the dead from their
crypt,
Not the dream from its throne.

SUNFLOWERS

The cost of gumption is also prohibitive.

Notice to expectant diners: Fruit salad you have with you always.

"If music be the food of love, play on" was not spoken of the ukelele.

Maxwelton would be a good name for a donkey—if his brays were bonie.

Girls who intend to marry men to reform them should try clubs first, and then shotguns.

A symposium on Piffle and How to Get Away with It ought to be worth while. Almost any popular politician or lecturer could talk indefinitely upon it.

THEY NEVER LEARN

It's almost March, and once again
The poet tunes his rusty lyre,
The young man's fancy turns to love
Despite what happened to his sire.

KANSAS IS LIKE FRANCE

CLIMATE RESEMBLES THAT OF HOME OF PERCHERON HORSES

Breeding Conditions Differ Greatly, However, Says Louis Aveline—United States Must Continue to Import Stock from Across Ocean

Conditions in the middle west are much like those in Le Perche, whence Percheron horses come. This opinion was expressed by Louis Aveline, one of the best known breeders of Percherons, now inspector for the purchase of war horses for the French army, who recently visited the agricultural college.

The crops in Kansas, Nebraska, Iowa, and Illinois are much the same as those of Le Perche, though the soil there is heavier and the climate is more equable.

EACH DISTRICT HAS SPECIALTY

Mr. Aveline pointed out the differences between the breeding in France and in America. Each district there, he said, has its specialty, different types of horses being raised in different parts of the country. In Mr. Aveline's district, the stallion rearer sells for export. The mares are on the small farms. A farmer with a 100-acre farm keeps five or six mares so that they will not work excessively. The selection of stallions is emphasized by Mr. Aveline.

WEIGHT NOT FUNDAMENTAL

"In the choice of stallions," he said, "we put less importance than the Americans on the weight. When you speak of a good horse here, you always say, 'How much does he weigh?' You will never hear that in France. If we have heavy Percherons, we produce them by selection, no more no less than to meet the demand of the American market.

"We find that usually the bigger the horse, the more lymphatic and the slower it is. A good horse of 16 hands is worth as much as a good horse of 17 hands. He certainly will not be so heavy but he will be as strong because he will have the energy that the bigger horse will not have.

BEST FAMILY GIVES BEST RESULTS

"In regard to the selection of a stallion I cannot insist too much on his line. The best horse does not always produce the best colts. But the best family of horses almost always gives the best results. Also it will be always necessary for those who want to retain in the foal of a Percheron its qualities, to use stallions born in the country of their origin, with good mares—I mean those which by selection of the stallion have already been improved.

"I am sure, therefore, that the exportation of Percheron horses to America must continue to take place—I shall even say more and more, although breeders are afraid of the competition of the tractor. Opinions differ on this subject. For instance, I read in the Breeders' Gazette an article written by a big breeder of Percheron horses in Canada, who is also a very big farmer. He says that the tractor is more expensive than a good draft horse, which can always find a ready market. I know several firms in Chicago and New York that have used tractors for a while and have returned to horses.

PERCHERON BEST FOR CROSSING

"It is true that if you breed small horses, such as I saw in Texas, Wyoming, and Montana, you will not find any market for them. But since the war has helped those ranchers to get rid of those small animals, let them now breed their mares to draft stallions, preferably Percheron horses. According to the opinion of many breeders, the Percheron horse is the best subject for crossing purposes, since the prepotency of the influence of its blood is a characteristic of its breed. The proof of this is that all other countries now want to imitate North America, for we sell Percherons to South America, Japan, and Russia. Even England this year has bought Percheron stallions and mares to export them to Great Britain, a fact

which will surprise Shiremen and Clydemens, knowing the jealousy of Englishmen for all their pure bred stock.

DON'T JUDGE FROM SHOWS

"Last year—I intend this statement for those who believe that America produces as high a quality as Le Perche—an Italian commission came to this country to buy forty Percheron stallions. It took only six. This shows that you must not be content with using only your animals born and raised in this country but you must continue to infuse imported blood.

"Many advocates of horses bred in the United States base their judgment of the condition of the Percheron horse only on what they see at the shows, where are presented all the best selected and fattened animals. There are certainly some very good ones but a show is not a place where you should judge the production of a big country. You must see it in the stockyards as I have done for more than two years, and after I have bought more than 25,000 horses. There it will be easy for you to see the proportion of home-bred which are above the average.

NOT LIKE IMPORTED HORSES

"I saw with wonder a class of imported aged mares entered at the Chicago show. You will object that they were full grown horses having reached their mature age. I should like to know, when all the home-bred entered at this show will reach their mature age, five or six years, whether this class will be equivalent to the class of imported horses. I believe that I can say they will be far from it.

"There are, I repeat, a few types which could compete, but very few. Then see the proportion of first-class horses that you produce in all the breeding industry of the United States. Of course I am speaking only of breeding horses. As to the work horses, I found them very good. I was even surprised to have such good horses and I must confess that I bought lately on the St. Louis market some remarkable geldings and mares, some mares nearly as good as those of our own production. I was even jealous to see that they could produce such good animals outside of Le Perche and I blame the American farmers for getting rid of such mares."

COMPARE GUARANTY AND ANALYSIS OF LIKE FEED

Inspector Tells How to Gauge Relative Quality of Commercial Product—Watch Fiber Content

By comparing the guaranty of any feed with the average analysis of similar feeds, its relative quality may be determined, according to A. E. Langworthy, feeding-stuffs inspector, Kansas Agricultural Experiment station.

"Fiber is the least valuable constituent of feeds," said Mr. Langworthy. "When the fiber content of a feed is high, the value of the feed is correspondingly low.

"In judging the quality of white shorts from guaranty, special attention should be paid to the fiber content. If the fiber content is high, it indicates that a large percentage of the bran coatings is present. These make a darker and coarser product, more like standard shorts.

"To find the amount of any constituent of a feed which \$1 will buy at a given price, divide the amount of that constituent present in 100 pounds of the feed expressed in pounds and hundredths—or the percentage—by the given price per 100 pounds. The sum of the amounts of all of the constituents equals, of course, the total amount of material \$1 will buy at that price.

"Many poultry feeds contain grit—in some cases as much as 20 per cent—and the kind of grit has not always been specified on the label as required by law. Both percentage and kind must be designated. A small percentage of some kinds of grit may be beneficial to confined poultry which cannot obtain a sufficient amount from other sources. The presence of such grit as common river sand in excessive amounts, however, is to be condemned as fraudulent."

DON'T GROW THEIR FOOD

MANY MEN NO LONGER MAKE FARM FURNISH FAMILY LIVING

Development of Specialized Types of Agriculture Has Produced New System—Next Few Years Critical for Single Crop Plans, Says Greene

Many farmers, especially in the grain belts, do not seem to realize the importance of making the farm, so far as possible, furnish a living for the family.

"Granddad tells us how he cut wheat with the cradle and compares the few acres he then grew with the broad acres of wheat now to be found on the average farm," points out George O. Greene, extension specialist in horticulture in the Kansas State Agricultural college.

IN THE OLD DAYS

"Wheat was not higher in price than at the present time. Grandmother was a good cook and so Granddad's family lived about as well as the farm families of today. It was the custom to make the farm furnish groceries, meat, butter, eggs, and milk for the family the year around.

"As new lands opened up and they were found to be adapted to certain types of agriculture this feature of a living first and profits a secondary issue was neglected and men began to follow types for which the section was noted or the type for which the individual had a natural bent. Canned vegetables and fruits could be had at the grocery store, meats and butter at the butcher shop, and because he lacked the natural inclination for producing a garden or orchard—the garden and orchard looked like such a small business as compared with the 200 acres of wheat or corn—he was apt to say, 'I can buy the vegetables or fruit cheaper than I can grow them.'

HERE ARE THE FIGURES

"Can he do so now? Take the two vegetables most likely to be purchased by the farmer—tomatoes and corn. The farmer buys a pretty fair grade of tomatoes for 12½ cents a can or at the rate of \$3 a bushel. The canning factory contracted for these at the rate of 25 cents a bushel. At this rate the farmer pays 12½ cents for a little more than one cent's worth of food.

"No goods that have to stand manufacturing, transportation, jobbing, and retail spreads can be purchased so cheaply as they can be grown. The next few years will be critical ones for the farmer who is following a one crop system."

EXTRAVAGANT LANGUAGE HAS NO PLACE IN PAPERS

Writer Who Uses Simple Words Holds His Readers, Says Editor of Breed Journal

Make your writing as simple as possible. In particular, avoid extravagance of expression. These rules were urged upon the students in industrial journalism in an address by Frank D. Tomson, editor of the Shorthorn in America.

"My own conception of writing," said Mr. Tomson, "is that it should be as simple as possible in its expression. It is interesting to know that such men as Mr. Sanders, of the Breeders' Gazette, one of the very best agricultural writers in the country, use a comparatively small number of words. Mr. Sanders' style of writing in his history of the shorthorn and in his other publications, has been direct and simple, using always those words which are easiest to understand and which at the same time convey the desired meaning. I believe that any writer who expects to attain any considerable degree of success ought to safeguard his own interest and that of the newspaper for which he writes by avoiding the clouding of his meaning by unnecessarily large words. A writer who neglects to take this precaution weakens his case and loses a large part of his audience from the very beginning. So in writing, I aim always to use the most sim-

ple and direct method of expression possible.

"Another thing I believe an editor ought to look out for is extravagance of expression. During the last 10 or 15 years we have observed a tendency to spectacular writing. Feature stories and magazines filled with glaring extravagances of language, have been frequent, and have served to bemuddle the mind of the average reader. I am happy to say, however, that this sort of writing is waning and going out of style, and I hope it will go completely out and stay out. Such writing is misleading to the readers and no editor who has regard for his readers should allow it in his columns. If you are going to do any kind of editorial work, always be accurate and let your expression be direct and simple.

"I read in a bulletin a statement to the effect that to be a successful agricultural editor one should be brought up on the farm and ideally should live on a farm. I am inclined to differ with this point of view. The man who lives on the farm is usually too busy, if he is a successful farmer, to do much writing, and if he does write, he cannot possibly be expert in more than one or two phases of his general field. The main business of the editor is to put down what other people have thought and said and to introduce into this his own ideas along the particular line being discussed.

"Probably the greatest agricultural editor of the past 25 years was the late Henry Wallace. His great ability as an editor lay in the fact that he could interview men and draw from them their expressions and record them in a way that would be appealing and attractive. He was not a success as a farmer. In a long list of shorthorn sales recorded at the time when Henry Wallace was engaged in farming, his sale produced the lowest sale prices in the country. This has sometimes been used as a criticism upon the ability and fitness of Mr. Wallace for an agricultural editor, but I have never regarded it as such. At the time of his death, Henry Wallace was regarded as one of the greatest agricultural writers in this country."

Mr. Tomson told interestingly of the editing of the Shorthorn in America and of its ideals as a breed paper. He also spoke briefly of a house organ, "Foresight," of which he is editor.

AGGIES AND MISSOURI TIED FOR FIRST PLACE

Local Basketball Team Has Strong Chance for Undisputed Title at End of Season

The Aggie basketball quintet is tied with Missouri for first place in the Missouri valley championship race. First position will be cinched if the Jayhawkers win at least one of the games to be played at Columbia tonight and Thursday night.

Last Wednesday and Thursday nights the local five defeated the Cornhuskers—45 to 13 and 39 to 10. Tuesday night the Aggies nosed out a 33 to 29 victory over the fast Emporia Normals in Nichols gymnasium. This makes a clean slate for the home court. The last game was hard fought throughout, the final result being in doubt at all stages of the contest.

The MacMillan five will go to St. Louis March 1, where they will play the Washington university team two games and will then close the season in a two game series at Columbia. The latter will in all probability decide the championship. Just what kind of showing the Kansans will make is somewhat of a problem, but from the standpoint of "dope" they have an edge on the Missouri team.

The following is the standing in the Missouri valley conference:

Team	Games Won	Lost	Pct.
Kansas Aggies	8	6	.750
Missouri	8	6	.750
Kansas University	12	8	.667
Ames	6	3	.500
Nebraska	6	1	.500
Drake	2	0	.000
Washington	6	0	.000

HOW DO WE KEEP ALIVE?

DR. J. T. WILLARD ANSWERS QUESTION OF HUMAN NUTRITION

Recently Discovered Accessories Are Necessary If Body Is to Function Properly, Says Chemist—Pellagra and Other Deficiency Diseases

The phenomena of nutrition are not all embraced in the utilization of fat, protein, carbohydrate, and ash, according to Dr. J. T. Willard, dean of the division of general science, in an address at the college on "The Principles of Human Nutrition."

Certain accessories present in minute amounts and of unknown chemical nature have been found to be absolutely essential to the proper performance of the functions of the animal body, Doctor Willard pointed out. Deficiency diseases, such as beri-beri, polyneuritis, scurvy, and pellagra, result from absence of these food accessories.

POSSIBLY 25 CHEMICAL ELEMENTS

"The human body," said the dean, "consists of about a dozen chemical elements in considerable amounts and perhaps as many more in smaller quantities. The functions of the more abundant elements are known in part, those of some of the others can only be guessed at. The body obtains these elements from food and after digestion and absorption the compounds which supply them are utilized, enabling the individual to grow, repair worn out tissue, and replace stored substances, and to produce the energy needed to carry on the various processes of the body and to do external work.

"Years ago the nutritional needs of the body were often stated in terms of the chemical elements, so much carbon, oxygen, hydrogen, nitrogen, etc., and the belief was entertained, or at least the impression was given, that it mattered little in what compounds these specified quantities of the elements were provided.

AS NUTRITION STUDIES PROGRESSED

"A later stage of practice was reached when the needs of the body were expressed in definite quantities of protein, fat, and carbohydrates accompanied by a certain amount of mineral substance or ash and water. These substances were recognized as not only the material needed to build body tissue, but also as the fuel by which body temperature is maintained and muscle force supported. Liebig regarded protein as the sole supporter of muscle work as well as the material from which body muscle is produced, while the carbohydrates and fat were held to be producers of heat for the maintenance of body temperature.

"Later investigation showed that all of the organic food constituents may support muscle work and maintain body temperature, and that the necessity for protein seem to be limited to its use in the production of nitrogenous body substances.

SOME PROTEINS MORE EFFECTIVE

"Further study has shown that the source of the protein in a food is by no means a matter of indifference; that for maintenance of body protein some proteins are three or four times as effective as others. The proteins are exceedingly complex in their makeup and those which are most like the body proteins in structure are physiologically most economical. Hence the proteins of meat excel those of grain in this respect.

"In respect to the mineral constituents of foods it is now known that the problem is not merely one of supplying a certain amount of the several metals, but that the amount required of any one is affected by the quantity of others present in the food, and that the mode of combination in which the metal is presented may be of great importance.

"Nutrition of the human body depends upon provision of water, compounds of metals, protein, fat, carbohydrates, and a large number of other substances in small amounts, including digestive and tissue enzymes, hormones and food accessories."

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BOYER IN FIRST PLACE

EDITOR OF COLLEGIAN WINS ANNUAL ORATORICAL CONTEST

Miss Strain and Bruce Second and Third—Industrial Journalism Students Victors in Five of Seven Contests Since Founding of Department

Arthur W. Boyer of Scranton, junior in industrial journalism, representing the Hamilton Literary society, won first place in the seventeenth annual intersociety oratorical contest, held Saturday evening in the auditorium. His subject was "America and Japan."

Miss Stella Strain of Phillipsburg, junior in home economics, representing the Eurodelphian Literary society, won second honors with an address on "Home Rule or Sinn Fein." W. G. Bruce of New York city, senior in animal husbandry and representative of the Webster Literary society, was awarded third place. He spoke on "A Greater Democracy."

HAMILTONS ARE IN LEAD

Since the establishment of the industrial journalism department in 1910, five out of seven winners of first place have been students in journalism. They are Roy I. Davis, Webster, winner in 1912; Mrs. Lucile (Berry) Wolf, Ionian, 1913; Wallace D. Hutchinson, Alpha Beta, 1914; Leo C. Moser, Athenian, 1916, and Mr. Boyer, the present holder of high honors. Of the 17 contests held, first place has been awarded to five Hamiltons, four Ionians, three Alpha Betas, two Athenians, two Websters, and one Franklin.

Mr. Boyer is a member of Pi Kappa Delta, honorary debating fraternity; Sigma Delta Chi, professional journalism fraternity; the American College Quill club, national writers' organization; and the Hamilton Literary society. He is editor-in-chief of the Kansas State Collegian, student paper of the college.

WORKS WAY IN COLLEGE

Mr. Boyer has represented the Kansas State Agricultural college in two intercollegiate debates, is an active member in literary organizations and is an exceptional student. He is working his way, but this has not restricted a general interest in college activities.

The contestants and the societies represented were Riley McGarraugh, Alpha Beta; Miss Rachel Clark, Browning; James A. Hull, Athenian; Miss Marie Johnston, Franklin; Miss Hattie Droll, Ionian; W. G. Bruce, Webster; Miss Stella Strain, Eurodelphian; A. W. Boyer, Hamilton.

MANY ALUMNI PRESENT

The auditorium was packed with students and townspeople. The sections reserved for the different societies were elaborately decorated. Everywhere were alumni. H. H. King, associate professor of chemistry, presided. Demonstrations by the different societies began at 7 o'clock and continued until 7:45. A musical number preceded each oration.

Mr. Boyer's oration was a careful presentation of the relations between America and Japan, which he stated had changed from "neighborly benevolence to polite animosity."

DISCUSSES JAPANESE PROBLEM

"The masterful, diplomatic, oriental mind," said Mr. Boyer, "is shaping the destinies of the far east. Beneath Japan's veneer of civilization there still lurk the restrained desires of the pagan, and in this day when treaties have become scraps of paper, who shall not say that Japan may some day make it necessary to repeat Europe's destructive lesson in Eastern Asia?"

"It is for America to wage a conciliating war of Christianization and education, backed by the dreadnaughts of industry and commerce. She must settle her oriental issues justly and

definitely. But in the day when oriental politics menace the peace of the Pacific, when argument is supported by dreadnaughts, and when reason and justice are crushed by hatred and greed, it is not for America to act the Pilate of the twentieth century. Rather must she demonstrate to the world that democracy is an established axiom, and that justice makes right between nations as between men."

WELL KNOWN MAGAZINE PRAISES MUSICAL WORK

College Department and Organizations Are Commended in Full Page Article

The department of music in the Kansas State Agricultural college receives prominent mention in Musical America, the most widely read musical magazine in the country. It contains a full page article on the department by Frederick H. Martens, well known song writer and opera libretto writer.

The article is strong in its praise of the advancement of the musical department and its work. Mr. Martens highly commends the music curriculum and the musical organizations of the college. In commenting upon the work of the department he says:

"Arthur Westbrook is a noted exemplar of the value of academic training in music. Since he has assumed charge the Kansas State Agricultural college has risen in deserved prominence as one of the many collegiate institutions of the country and particularly in the west, which offers to the earnest student every opportunity for the study of music, not as a profession but because of its importance in daily life and the cultural influence, inspiration, and pleasure it affords."

PLANT SWEET PEAS NOW IF YOU WANT RESULTS

Flowers Are Easily Grown if Good Seed Is Obtained and Soil Is Properly Prepared

Now is the time to plant the sweet peas. These flowers are easily grown if the soil is properly prepared and good seed is used, according to M. F. Ahearn, professor of landscape gardening in the Kansas State Agricultural college.

"Germination may be hastened by soaking the seeds in warm water before planting," said Professor Ahearn. "The trench method is considered the most successful way of planting. The trench should be from six to eight inches deep and a foot wide. The bottom of the trench should be turned and well rotted manure worked into it. Firm the soil, and plant the seeds in the bottom of the trench in two rows, six inches apart, one seed to an inch in the row.

"The pit should be left open until the plants appear and should be filled gradually as they grow. This encourages the development of long roots and gives the plants the ability to withstand the hot summer months. If the weather is cold when the plants first appear, the pit should be partly filled with dry leaves to protect them until the warm weather. Thin the plants to a distance of three inches.

"A trellis should be provided for the vines. It may be made of wire netting, cross bars being nailed between the uprights for support. A netting that sags causes injury to the vines and is unsightly. The trellis should be from four to six feet high. The tips of the vines should be clipped when they attain a height of six feet. More blooms will follow each picking."

TREES IN ALL KANSAS

COLLEGE PROFESSORS MAKE PLANS TO ACHIEVE IDEAL

Forester and Rural Service Specialist to Speak at Community Meetings and Assist in Planning Systematic Planting Campaigns

A statewide tree planting campaign has been started by the Kansas State Agricultural college. Charles A. Scott, state forester, and Walter Burr, director of the rural service department, division of extension, will speak at community meetings where interest is taken in systematic tree planting, and will suggest plans to meet local conditions.

A second series of meetings will be held early in April, when actual tree planting will be done. The general public is expected to participate in the work. The toilers will get together to enjoy community dinners in each place where the campaign is pushed.

TEACHERS ARE PUSHING WORK

Several towns have asked for dates, and others are expected to fall into line soon. The requests for meetings are being made by civic organizations. Stafford county, through the teachers, is planning to conduct a general campaign. A community meeting will be held in St. John.

A bulletin on "Tree Planting in Kansas," prepared by Professors Scott and Burr, and issued by the division of extension of the college, not only gives details of the campaign, but contains valuable suggestions relative to putting out trees. It will be sent upon application to those interested in the project.

CONDITIONS IN CENTRAL KANSAS

"The need of a tree planting campaign is evident to those who travel over the state," commented Mr. Burr. "As a result of drouth and insect attacks in 1912, 1913, and 1914, many of the trees in central Kansas were killed. The trees originally planted were soft maple, box elder, and cottonwood, which have a life span on the uplands of approximately 30 years. Most of these trees are dead and little is being done to replace them.

"The valuable trees, such as black walnut, oak, sycamore, elm, and hackberry, have had a greater resistance to drouth than the more common varieties, and such varieties, consequently, should replace the less valuable ones.

"Large areas in Kansas have not been planted to trees. The work of planting should have proper guidance and should be pushed vigorously. Kansas must not be allowed to become a treeless state."

MRS. VAN ZILE ANNOUNCES HOME ECONOMICS PROGRAM

Special Conference to be Held in Connection with Educational Association Meeting in Kansas City Friday

Mrs. Mary Pierce Van Zile, dean of home economics in the Kansas State Agricultural college, has announced the program for the home economics conference to be held at Kansas City, Mo., Friday, in connection with the winter meeting of the department of superintendence, National Education association.

Dean Catharine MacKay of the Iowa State college, president of the National Home Economics association, will preside.

The morning program: Greetings, Dean Catharine MacKay; "Some Problems in Home Economics in the Public Schools," Mrs. Henrietta Calvin, specialist in home economics, bureau of education, Washington, and Dr. J. H. Francis, superintendent of schools, Columbus, Ohio; "Project

Work in Teaching Home Economics, its Value and its Limitations," Dean W. W. Charters, University of Missouri; "The School Lunch as a Project in Teaching Foods and Cookery in the Elementary and High Schools," Miss Essie M. Heyle, supervisor of home economics, public schools, Kansas City, Mo.; Mrs. Mary Baker, vocational high school, Memphis, Tenn., and Miss Jennie Snow, department of household arts, Chicago Normal college.

The program for the afternoon session follows: "Fundamental Interrelation of Courses in Home Economics and Other High School Subjects," Miss Josephine T. Berry, chief of division of home economics, University of Minnesota; "Teaching the High School Students their Responsibilities as Consumers," Miss Hildegard Kneeland, department of home economics, University of Missouri; "A Consideration of the Subject Matter of Textiles as a Part in the Teaching of Clothing," Mrs. Kate Kinyon, supervisor of household arts, public schools, Lincoln, Neb.; "Principles of Design in Relation to the Teaching of Clothing and House Furnishing," Miss Araminta Holman, supervisor of home art, Kansas State Agricultural college, and Miss Ethelwyn Miller, school of education, University of Chicago.

Mrs. Van Zile is chairman of the program committee. Other members of the committee are Miss Elizabeth Sprague, University of Kansas; Miss Essie M. Heyle, Kansas City, Mo.; Miss Louise Stanley, University of Missouri.

THIS IS PLANTING TIME FOR EARLY VEGETABLES

Sunny Window, Hotbed, or Greenhouse Is Suitable, Says Horticulturist—Essentials for Good Production

Now is the time to plant seeds for early vegetables. This may be done in a sunny window, a hotbed, or a greenhouse.

Selecting the best early varieties, planting early, and choosing a favorable location for a garden are three requisites in the production of early vegetables, according to M. F. Ahearn, associate professor of horticulture in the Kansas State Agricultural college. The man who plowed his land in the fall will have an advantage over the gardener who put off this operation.

Vegetables usually forced in the window, the hotbed, or the greenhouse are the tomato, the cabbage, the cauliflower, the pepper, the muskmelon, and occasionally the onion. The seed should be sown either broadcast or in shallow drills. When the plants have formed from one to four leaves they should be transplanted from two to four inches apart in other boxes, and when the weather conditions are suitable reset in the field.

Some plants respond readily to the addition of commercial fertilizers, pointed out Professor Ahearn. A quick acting fertilizer will hasten the maturity of the vegetable. Some of the vine crops, such as melons and cucumbers, often are forced by placing glass covered boxes over them until they have obtained a good growth.

The best location for an early garden is a southeastern slope. Early vegetables raised and recommended by the agricultural college are stringless green pod and bush lima beans; Crosby's Egyptian beets; black seeded Simpson and improved Hanson lettuce; early scarlet turnip and white Strassburg radish; Victoria spinach; premium flat Dutch and early Jersey Wakefield cabbage; Nott's excelsior and Gradus peas; mammoth white Cory, Stowell's evergreen, and country gentleman sweetcorn.

MAKE FARM WORK PAY

COLLEGE GRADUATES INCREASE AGRICULTURAL PROSPERITY

Frank Jarrell Tells How Railroads Co-operate in Bettering Rural Conditions—Schools of Journalism Improving Periodicals

That investigations conducted by the Santa Fe railway have shown that farming communities in which there are graduates of the Kansas State Agricultural college are more prosperous than those where there are no representatives of this institution, was pointed out by J. F. Jarrell, director of publicity for the Santa Fe, in an address before the students of the college.

"In the communities where students of this college live there are better social conditions," said Mr. Jarrell. "The flow of the young men from the farm to the city is not so great as in other communities.

"The Santa Fe railway has never missed an opportunity to coöperate with the Kansas State Agricultural college in any way possible. This railway runs a special agricultural train each year to show the results of experiments carried on by the college. The Santa Fe does this because it believes that the message carried to the farmers will help to solve the problems that confront them.

COLLEGE LECTURES PRODUCE RESULTS

"When these trains were first started there was some prejudice against them but that has been overcome. The Santa Fe has kept a record of all the towns visited by these agricultural trains and satisfactory results have been found in every community where the instructions of the college lecturers have been followed."

Mr. Jarrell urged the students to form an organization of the Kansas State Agricultural college graduates and students in every county of the state to let the people of Kansas know what is being done by the college and to send more young people here for their education. Mr. Jarrell strongly urged that these organizations work for a permanent income for state institutions.

MUST KNOW WHAT TO WRITE

The crying need of newspaper men today is to know what to write and what to print, Mr. Jarrell told students in industrial journalism.

When a person enters the field of journalism he should find out the needs of the individual and the community, and then help solve the problems, he pointed out. The average person has no time for frivolities and it is necessary to write articles that grip the reader.

Thorough preparation for the work is important, commented the speaker. Modern schools of journalism offer excellent opportunity for this training. Young men and women will go out from these institutions and will raise the standards of newspapers and other periodicals all over the country.

TRAINED JOURNALISTS ARE BEST

"I have no patience with the old fashioned editor who sees no good in schools of journalism," said Mr. Jarrell. "I want to give my testimony in favor of the trained journalist."

Mr. Jarrell told of the work of the Santa Fe publicity department—how 10 years ago it was established because E. P. Ripley, president, believed there was too much difference between the views of the railroad and those of the people, and how 22 railroads have since established similar departments.

Every farmer living on a main-traveled highway should plant trees and shrubs that will beautify his home. It will add to the value if the farm is for sale, and will add to the comfort if it is not on the market.—Oklahoma Farmer.

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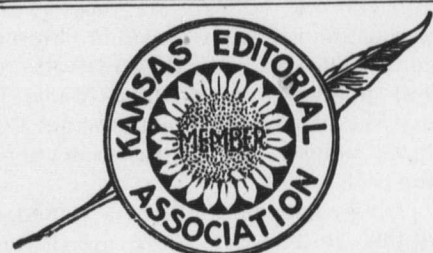
H. J. WATERS, PRESIDENT Editor-in-Chief
N. A. CRAWFORD Managing Editor
J. D. WALTERS Local Editor
ADA RICE, '95, M. S. '12 Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

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WEDNESDAY, FEBRUARY 28, 1917

FOR FIRE PREVENTION

Fire destroyed nearly two million dollars' worth of Kansas property in 1916, according to the report of the national board of fire underwriters. Seventeen per cent of this was due entirely to individual carelessness, while nearly 40 per cent more of the loss is ascribed to partly preventable causes. What started the rest of the fires is unknown, but the board suggests that they were "probably largely preventable."

Insurance is desirable, lightning rods afford protection against one class of fires, especially in the country, but the most far reaching remedy is intelligent care and cooperation on the part of the public.

FRUIT—NOT FLOWERS

The fact that students in the course in industrial journalism have won five out of seven oratorical contests held since the course was established is an interesting commentary both on the value of journalistic training and on the type of public speaking which appeals to the modern mind.

Ten courses are offered by the college. That more than 80 per cent of the winners of the college oratorical contests have been students in this one of the ten courses, indicates the effectiveness of training in journalism as a preparation for getting one's message to the public. The student in journalism is taught that he must get his message across—that is fundamental. Journalism emphasizes the printed page. When the student wants to make a speech, he simply transfers his lesson to the platform, where he gets his message across by means of the spoken word.

Each of the industrial journalism students who won the contests represented what may be termed the journalistic type of address. In style of writing and in manner of speaking, each of these students was clear cut, direct, forceful. None of them stopped in a speech to pick flowers—oratorical or any other. They were intent not on the flowers, but on the fruit. And this is what the modern man or woman wants. He has slight patience with ornamentation for its own sake. Trained by the modern newspaper and the modern magazine, he wants a story, an article, a speech, a course of action, to be simple, clear cut, and direct. Flowers may do for the specialist, but for him—the fruit.

LIVING COST HIGH IN 1861

The high cost of living in 1861 came to light yesterday at Independence, when A. J. Bundschu discovered a bill made to the county court in that year from the firm of Pendleton & Shortridge. The senior member of the firm was the father of Judge Samuel T. Pendleton, of the county court. The bill was for sorghum molasses at 75

cents a gallon and brown sugar, at nine pounds for \$1.

The commodities can be bought for much less now. Sugar is selling at 15 pounds for a dollar and sorghum molasses, although a rarity, brings 60 cents.—Kansas City Journal.

READER AND ADVERTISER

The right sort of an agricultural paper has three rather distinct fields of service: First, it gives its readers reliable information on agricultural matters, crops and crop growing, live stock breeding and feeding, agricultural news of all sorts—in short, everything which relates to the scientific and the practical side of farming. Second, it deals with economic and semi-political questions which have a direct bearing on the welfare of agriculture, and with the social and educational movements of the open country. Third, through its advertising columns, it introduces to its readers the makers and sellers of things which they can use to advantage in carrying on their work more successfully or more easily or more happily.—Wallace's Farmer.

SALT FOR DAIRY COWS

Doctor Forbes, of the Ohio Experiment station, who is widely recognized as one of the leading experts on animal nutrition, has found that the ordinary cow, giving 45 pounds of milk daily, needs about one ounce of salt a day. Some dairymen advocate more than this. It would seem wise, however, not to feed an ordinary cow more than an ounce of salt daily, mixed with her feed. If there is reason to suspect that this amount of salt is not enough, the cow should be allowed to eat what extra salt she wishes by placing it before her, unmixed with anything else. Salt is absolutely necessary for the dairy cow, but there is danger of giving too much as well as giving too little. In case of doubt, let the appetite of the cow decide, and don't compel her to eat more than she needs by mixing it with the feed.—Wallace's Farmer.

GRAIN SORGHUMS AS FOOD

Although the protein of the grain sorghums has been shown by dietetic experiments of the office of home economics of the United States department of agriculture to be less digestible than that of corn or wheat, all the sorghums except kaoliang furnish a fairly good source of protein and practically as good a source of carbohydrates as the two grains in most general use. The department specialists, therefore, find the grain sorghums worthy of use in all sections to give variety to the diet. In regions where other cereals are not so successfully grown, it is pointed out, the grain sorghums may contribute materially to the supply of substances suitable as human food.

Tests were made with kafir, feterita, milo and kaoliang, both in the form of bread and as mush. Check tests were made also with corn and wheat as breads. All six of the grains were ground into meals of the same fineness in the same mill. In the experiments with the breads, the average digestibility of the protein of the wheat was found to be 77.3 per cent; corn, 59.9; kafir, 51.2; feterita, 50.6; milo, 40; and kaoliang, 19.8. In the experiments with mushes made from meals of the four grain sorghums, the digestibility of the protein was about 48 per cent for feterita and kafir, approximately 34 per cent for milo, and only 4 per cent for kaoliang. The digestibility of the carbohydrates was high for all six grains, ranging from 95.3 to 98.6 per cent.

The results of the investigations as a whole indicate that while it is best to use some wheat flour to make up for the lack of gluten in the sorghum meal, a fairly large proportion of the meal may be satisfactorily used in admixture with wheat flour in the preparation of common foods. In preparing the grain sorghums for food it is important to make certain of the absorption of water in such quantities that the particles of meal, which are characteristically hard or flinty, may be well softened.

A QUARTER CENTURY AGO

Items from The Industrialist of February 27, 1892

Professor Hood bears the expense of a new street crossing in front of his house.

Foreman Baxter writes on "Pansies from Seed" in the current issue of the Kansas Capital.

Grass is starting and some trees are budding, and all the indications point to an early spring.

was made up largely of subjects dealing with photography in its various branches. Papers were presented by Professors Hood, Willard, Breese, and Marlatt.

Our collection of minerals is enriched this week by valuable specimens of zinc blend (black jack), gale-nite, marcasite, barite, and stalactitic melanterite (native copperas), all sent by W. P. Holman, formerly of Man-

Just a Reporter

Tom Dillon in the Seattle Star

Died—Louis B. Sefrit, reporter, age 35.

These few words tell much or little, as they are read. That a fellow dweller on this earth with us is gone; his name; that he lived and worked as a recorder of events, and that his span was 35 short years.

To those that know how to read aright, there is much more in this compressed epitome of a life and death. There is recorded the passing of a soul; the silencing of a heart and the chilling of a mind. There is contained all the inscrutable mystery of this existence of ours.

Louis Sefrit came into this world and has passed on. For him the "roaring loom of Time" is all forever stilled. Today they will take him to the cold, narrow bed to be his forever more. He will not be seen longer in his accustomed places; he will never again greet his friends or love his loved ones. He is come and gone and is as if he were not.

So has Louis Sefrit died, unheralded and unsung, leaving behind an ache in many a heart and a clean name. There is no halt in the clash of world interests that he is gone from among us—he was only a reporter, a historian of each day, a humble anonymous teller of the world's story, one of the many in the ranks, shut out from fame, wealth, or glory.

Just a reporter—nothing more, except an honest man who did his work and died. Yet today the simple casket that contained his clay was buried deep beneath the floral offerings of those who had known him; fragrant remembrances from every walk of life—merchants, policemen, fellow newspaper men, firemen, lawyers—all sent their roses and lilies to light the long dark road on which he had started.

Just a reporter—but many a man of wealth and position has gone to his rest leaving less sorrow in his wake; many a man of fame, whose fame was built by such as Louis Sefrit, has sunk down into oblivion whom the world could more gladly spare than this man, who was—just a reporter, the hurried worker of a tired day.

When Louis Sefrit died he left none but friends behind him. In his nine years in Seattle as a reporter he encountered many men on many occasions. His path was strewn with temptations; opportunity for evil lay at every hand. But he made his way honestly and manfully, with a deep and abiding love for his fellows, and a wide embracing charity for their sins and weaknesses.

And all the time he was just a reporter, "turning in his copy" from day to day, to be read by thousands, who never knew and never thanked him. In these nine past years, how many have learned something from him? How many have formed opinions by reason of what he wrote? How many have been stirred to thought, reflection, and determination by his words, each unknown to the other?

Louis Sefrit did his work, and did it well—just a reporter. His work is now done, his last copy is in, and he stands at the Great City Desk to report his assignment "covered." For his the Journal of Time has gone to press, with its "scoops" and "fall downs"; the plates of Life are cast beyond change. His first edition is off, and he has joined the staff of Eternity—perhaps just a reporter.

The Anthony Republican devotes more than four columns to a report of the Bluff City institute.

E. M. Fairchild, '90, has returned to Andover, Mass., to complete his second year in the seminary.

Professor Hitchcock took advantage of the People's party convention at St. Louis to visit his family Saturday and Sunday.

D. W. Working, Jr., '88, signs his communications to the Colorado Farmer "Worthy Master, Colorado State Grange," of Denver.

The horticultural department this week purchased a fine team of black horses from James Barry of Manhattan, paying therefor \$250. The horses are four years old, evenly matched, and weigh about 1,200 pounds each.

The Scientific club met in regular session last evening. The program

hattan, now located at Webb City, Mo.

The lecture yesterday afternoon was by Professor Failyer on a geological topic. He gave a brief description of the best known ornamental stones, and indicated the many uses to which they may be and are put. Specimens from the museum illustrated the lecture, and on its conclusion were objects of interest to a large number of students.

Governor Humphrey has appointed two new regents—the Hon. R. P. Kelley of Eureka, Greenwood county, and the Hon. F. M. Chaffee of Wycoff, Lyon county, to succeed Regents Hessin and Caraway. Regent Hessin's term expires April 1, and he has not sought reelection. Regent Caraway's resignation is made necessary by reason of his being postmaster at Great Bend.

AMANTUM IRAE

Ernest Dossion in Bruno's Weekly

When this, our rose, is faded,
And these, our days, are done,
In lands profoundly shaded
From tempest and from sun:
Ah, once more come together,
Shall we forgive the past,
And safe from worldly weather
Possess our souls at last?

Or in our place of shadows
Shall still we stretch an hand
To green, remembered meadows,
Of that old pleasant land?
And vainly there foregathered,
Shall we regret the sun?
The rose of love, ungathered?
The bay we have not won?

Ah, child! the world's dark margs
May lead to Nevermore,
The stately funeral barges
Sail for an unknown shore,
And love we vow tomorrow,
And pride we serve today:
What if they both should borrow
Sad hues of yesterday?

Our pride! Ah, should we miss it,
Or will it serve at last?
Our anger, if we kiss it,
Is like a sorrow past.
While roses deck the garden,
While yet the sun is high,
Doff sorry pride for pardon,
Or ever love go by.

SUNFLOWERS

There is a place for everything except an overdraft.

The man who is fired by enthusiasm always gets a better job.

Spring poetry will not cost any more than usual this spring.

Any number of people expect to do magazine work sooner or later.

The age of discretion is as hard to determine as the age of an unmarried woman who looks to be between 40 and 50.

And now we shall have to go through a lot of misery while the newspapers discuss new names for the Danish West Indies.

If Adam were living nowadays he would think a while before eating an apple. And Eve would be sure to spot one without the aid of the serpent.

A gold wrist watch, a ukelele, and a "feller" with a runabout are about all that the average girl wants. It's amazing how easily pleased some people are.

The number of words that the war and golf and the motor business have introduced into the language ought to make old Noah Webster glad that he died when he did.

THE RISE OF THE PEANUT

The humble goober, better known in the north as the peanut, seems destined to come into its own in these days of reversing the established order of things. Instead of being limited to the feeding of the multitude at the circus and baseball games, furnishing a handle to use in front of the ward politician when sarcasm is demanded, or to furnish forth the basis of an alleged funny story in connection with breakfast foods, the peanut is on the way which leads to recognition in the most exclusive commercial circles. It may even happen that King Corn may follow King Cotton into the discard with the packs and deuces of commerce and King Peanut reign in his stead. He is on the march, and it looks as if nothing could stop him. All this has been made possible by the discovery that peanut oil is superior to cotton seed oil and brings more money. Thousands of acres of land in the south hitherto sacred to cotton will be planted to peanuts this season. Incidentally it may be feared that so much attention from those in high places of finance may lead the peanut into the way marked "Higher Cost of Living."—Rochester Democrat and Chronicle.

AMONG THE ALUMNI

J. B. Lund, '15, has accepted a position as instructor in the high school at Fredonia.

M. R. Tinkham, '09, has moved from Kinsley, Kan., to a farm on rural route 2, Humboldt, S. D.

Miss Emma Evans, '15, who is teaching at Haddam, was here for the week end to attend the oratorical contest.

W. R. Curry, '14, spent last week in Manhattan visiting his brother, D. E. Curry, junior in animal husbandry.

Miss Mildred Tolles, '16, is dietitian in Ellsworth hospital. She writes that she is well pleased with her work.

Miss Hattie Abbott, '13, who is teaching near Randolph, spent the week end at her home in Manhattan.

Miss Juanita Hoke, '12, attended the meeting of the Riley County Teachers' association at Riley February 17.

Mrs. Ethel (Marshall) Anderson, '14, of Topeka spent the week end visiting her parents, Mr. and Mrs. Alvin Marshall of this city.

J. E. McDowell, '11, recently accepted the position of superintendent of the service department of the Rauch and Lang-Baker Co. of Chicago. His address is 5413 Ellis avenue.

B. K. Baghdigian, '16, spoke at Roxbury February 16. His lecture, "The Most Tragic Story in Human History," is a graphic portrayal of the present situation in Armenia. While at Roxbury, Mr. Baghdigian was the guest of F. H. Dillenback, '16, principal of the Roxbury high school.

John Z. Martin, '11, has just been elected treasurer of the University club of San Diego, Cal. The club recently erected a new house valued at more than \$100,000. There are 300 members representing colleges in all parts of the country. Mr. Martin is superintendent of the Fairmount Water company.

Dr. F. M. Hayes, '08, is enjoying strenuous and successful work at Davis, Cal., where he is veterinarian in charge at the university farm. During the holidays the first veterinary short course was held at the farm with an attendance of 70. Recently the Western Berkshire congress met there and in a swine judging contest for women, Mrs. Hayes—formerly Miss Flora C. Knight of the English department of the Kansas State Agricultural college—carried off one of the 14 silver trophies.

BIRTHS

Born, to Mr. and Mrs. W. E. Grimes, '13, at their home in Manhattan, on February 19, a daughter, Rose Ethel.

Born, to Dr. C. A. Pyle, B. S. '04, D. V. M. '07, and Mrs. Vera (McDonald) Pyle, '04, on February 20, a son.

Born, to Dr. H. B. Robison and Mrs. Bess (Moorman) Robison, '12, of Ellinwood, on February 13, a daughter, Barbara Beth.

Born, to Mr. Robert A. Fulton, '05, and Mrs. Fannie (Reynolds) Fulton, '05, Cleveland, Ohio, on February 18, a son, Robert Reynolds.

LABOR PROBLEM ON DAIRY FARM—HOW TO SOLVE IT

Good Quarters and Uniform Hours of Work Will Hold Intelligent Young Hands

"Give the intelligent young dairy hand good quarters and uniform hours of work and you have done much toward solving the labor problem on the dairy farm," asserts O. E. Reed, professor of dairy husbandry in the agricultural college.

"Do not consider the milking and care of the cows as a chore to be done before and after 10 hours of field work, and a waiting list for employment will soon be developed. It is not reasonable to expect a man to work 10

hours in the field and then milk from six to 10 cows by lantern light.

"The fundamental reason why there is a labor problem on the dairy farm is that in many cases the owner is not milking profitable cows and he cannot pay enough to get satisfactory help about the dairy."

A reliable young farm hand who is anxious to get ahead would rather work on a dairy farm than on a grain farm, believes Professor Reed. Employment on the latter is not steady, while on the dairy farm there is a job every day in the year. It is well to give the dairy hand a day off occasionally, so that life will not become too monotonous.

BIG LIVE STOCK PROBLEM IN PRICE FLUCTUATION

Co-operation Between Buyers and Raisers Is Needed, Says Specialist in Agricultural Economics

The biggest problem confronting the live stock producer is the constant fluctuation in prices, according to Theodore Macklin, in charge of agricultural economics in the Kansas State Agricultural Experimental station. Coöperation is needed to solve the problem.

"The farmer does not understand why the fluctuations constantly recur," said Mr. Macklin. "Beef to a large extent is sold within two weeks of the time it is slaughtered. Beef products, in other words, are not stored as are bacon, butter, eggs, and poultry products.

"Since storage is not a prominent factor in the marketing of beef, the surplus live stock cannot be slaughtered in a season of high production, held over by storage, and then sold in a season of low production, as can butter and eggs. Every threatened oversupply of beef animals on the temporary or daily market seriously influences the price.

"If the threatened oversupply actually becomes an oversupply, prices tumble and it should be taken as an indication that it is a poor time to market the stock.

"Because of the nature of live stock feeding the farmer is almost compelled to sell when his animals are fat. Individually, then, it is almost impossible for the farmer to prevent violent fluctuations in the supply on the daily market. In order to prevent this fluctuation in supply, more nearly uniform production of beef animals is necessary, so that at no particular season is the temporary market obliged to handle more live stock than can be sold at a price which can give a fair profit to the farmer.

"At the present time, unfortunately, any suggestion on the part of the live stock buyer to indicate what grades and what amounts of these grades of live stock to market at a given time is received with suspicion by the farmer. There should be coöperation between farmers and local buyers, either coöperatively employed or privately employed, which will more uniformly regulate the flow of fat stock from the farms to the stock yards."

WOOD ASH NOT DESIRABLE FOR GENERAL FERTILIZER

Soils of Kansas Do Not Need the Potash Which It Supplies

For general farming in Kansas it does not pay to use wood ash as a fertilizer, according to R. I. Throckmorton, associate professor of agronomy in the agricultural college.

"Wood ash is valuable as a fertilizer chiefly for the potash it gives to the soil," said Professor Throckmorton. "The soils of Kansas do not need this for general farm crops.

"Some persons have the impression that coal ash is valuable as a fertilizer but this is not true. Coal ash contains only a small amount of potash and consequently is of little value as a fertilizer.

"Ash from corn cobs has the highest percentage of potash contained in any kind of ash. Corn cobs that have been burned thoroughly yield ash with a content of potash as high as 40 per cent."

BEST FEED FOR SHEEP

ALFALFA IS ONE OF THE MOST SATISFACTORY ROUGHAGES

Has Been Given More Extensively to Other Classes of Live Stock—Is Cheap Source of Protein and Also Furnishes Bulk

Alfalfa, when carefully fed and pastured, is one of the best roughages for sheep, in the opinion of A. M. Paterson, instructor in animal husbandry in the Kansas State Agricultural college.

"The rapid increase in the production of alfalfa in the United States during recent years has resulted in a more careful study of its possibilities as a food for all classes of live stock," said Mr. Paterson. "Formerly it was used primarily as a cattle feed but now it is used widely as a feed for horses, swine, and sheep.

VALUE WILL INCREASE

"Less use has been made of alfalfa for sheep, however, than for any other class of live stock. Experience and experiments have shown its wonderful value as a sheep feed. Its value for this purpose will be still greater in the future than at present.

"When alfalfa is pastured great care should be taken to prevent bloat. If the alfalfa has become woody or is mixed with other grasses the danger is somewhat lessened. Care should be taken at all times, however. Before turning the sheep on alfalfa they should be filled up on hay, fodder, or other roughage, and turned out only when the alfalfa is free from moisture of any kind.

FREE ACCESS NEVER SAFE

"They should be allowed to pasture only a short time the first day and the length of time should be increased a little from day to day until the sheep are accustomed to the feed. Flockmasters have found that it is never safe to give sheep free access to alfalfa pasture.

"Alfalfa hay is adapted to the feeding of sheep because it is a cheap source of protein and also because it supplies enough bulk so that sheep may be fed to advantage on it alone.

CONSIDER PRICE AND QUANTITY

"The amount of alfalfa fed will depend upon the price and the amount available. When it is cheap and plentiful and other roughages are scarce, alfalfa could compose the entire ration for the flock. On the other hand, when hay is scarce and high priced, the ration could be made up partly of straw, fodder, and like roughages. Compared with other roughages alfalfa as a sheep feed has the advantage, especially where grown in large amounts."

In experimental feeding trials, averaging 100 days each, alfalfa was compared with timothy and prairie hay. The lots fed alfalfa made greater gains and required less feed per 100 pounds than did the lots fed timothy and prairie hay.

BEATS, CLOVER, AND COWPEAS

The comparative value of alfalfa and clover hay for sheep feeding is a disputed point. Experimental tests indicate, however, that there is a slight difference in favor of alfalfa.

In experiments conducted at the Kansas station to determine the relative value of alfalfa and cowpea hay, lambs fed alfalfa hay made more rapid and cheaper gains, showed the same amount of finish, and a much greater profit than lambs fed cowpea hay.

GEESSE MAY BE RAISED CHEAPLY AND EASILY

Market Price in Middle West Is Low but Is Rising—Emden and Toulouse Suitable for Kansas

Raise geese! A few of them will pay on every Kansas farm, in the opinion of N. L. Harris, superintendent of the Kansas State Agricultural college poultry farm.

"Geese are exceptionally good rangers and can be raised more economically than any other kind of poultry," said Mr. Harris. "Waste ground may be inclosed with 24-inch hog wire and the geese allowed to feed

at will on grass and insects. If the ground is damp or wet and the supply of tender green feed is plentiful the geese grow rapidly and are ready for market when 12 to 16 weeks old.

"When the geese are six weeks old they get their living from grass, bugs, and worms, and require little if any grain. They may be turned out to forage during the day.

"The goose industry has not been developed in the west because the market price is so low. The price, however, is almost twice as high as that paid a few years ago.

"While geese produce meat cheaply and are extremely easy to raise, people have not learned to relish goose meat in the middle west. Raising geese in large numbers would not be profitable on account of the distance to markets. Every farmer, nevertheless, should raise enough geese for home consumption and for the feathers for home use. The largest numbers of geese are found among the German settlements in southeastern Kansas."

The best breeds to raise in Kansas are the Emden, a white goose, and the Toulouse, a gray goose, believes Mr. Harris. These are the largest geese. Because no water need be provided for swimming purposes, they are called "dry land" geese.

While geese forage well and produce meat cheaply, they are of little value in egg production further than for breeding purposes. The young geese seldom lay more than 20 eggs a year and from 30 to 40 is an exceptionally high record for an older goose. Geese for breeding purposes can be profitably kept until they are from eight to 14 years old.

FOR EXTENSION WORK AMONG NEGRO FARMERS OF KANSAS

F. W. Kirk of Oklahoma Is Employed by Agricultural College

An extension agent for negro farmers has been employed by the division of extension of the agricultural college.

F. W. Kirk of Oklahoma City, born and brought up on the farm in Oklahoma and a graduate of Langston Agricultural college, will spend much time in assisting the colored people in the villages and towns of Kansas in gardening, canning, and poultry work. Mr. Kirk has had special training and experience in gardening and truck growing. His headquarters will be at the agricultural college. Any village or country community may make application for his services.

MISSOURIANS NOW LEAD IN VALLEY RACE WITH AGGIES

Local Five Have Chance to Win Championship in Final Four Games

The Missouri valley basketball championship race has become a contest between the Missouri Tigers and the Kansas Aggies, with the Missourians having the odds on the Kansans. To win the pennant the MacMillan five must win two games from the Washington team next Friday and Saturday, and then be victorious in a two-game series at Columbia, March 4 and 5.

Should the Tiger team win both games from the Aggies and drop one contest to the Washington team it is still possible for the Missourians to win the Valley honors.

The dope finally dwindles to one thing—the Aggies must win the remainder of their games while the Missouri team can drop one contest and still have a higher percentage for the championship.

Following is the present standing of the two leading teams:

Team	Games Won	Lost	Pct.
Missouri.....	10	8	.800
Kansas Aggies..	8	6	.750

The recent cold wave in Florida is said to have been the most disastrous that has visited that state for more than twenty years, doing countless thousands of dollars worth of damage to orange and grapefruit groves.—Progressive Farmer.

ON AN AFRICAN FARM

FRANK SNOW TELLS OF AGRICULTURE IN RHODESIA

Natives, Boers, English, and Chinese and Indian Coolies Are at Work—Baboons Trouble Blacks and Whites, but Former Welcome Locusts

Agricultural conditions and methods in Rhodesia, south central Africa, were described by Frank L. Snow, instructor in industrial journalism, in an address Tuesday morning before the students of the Kansas State Agricultural college.

Professor Snow was for a number of years a resident of Rhodesia, part of the time as a farm superintendent and the rest as a newspaper man. For some time he conducted the agricultural department of the Rhodesia Herald.

WILL DEVELOP AFTER WAR

Possessing a delightful climate and a fertile soil, Rhodesia will after the war, Mr. Snow believes, be extensively developed agriculturally. Four groups of farmers are now at work there—the natives, the Boers, the English, and the Chinese and Indian coolies. The white population numbers 20,000; the black, 350,000. The colony is about nine times the size of Kansas.

"The natives," said the speaker, "plant their seed in ridges and leave it to nature to produce the harvest. Because the lands are always comparatively new, weeds usually are not a menace. The natives grow corn, kafir, ropoko—a reddish grain, pumpkins, beans, artichokes, sweet potatoes, melons, and other crops. In cultivating the soil the natives use small hoes with handles resembling crookneck squashes. The native live stock is stunted.

BABOONS EMULATE SMALL BOYS

"The natives, as well as the whites, have their troubles. Baboons are particularly destructive to crops. It is a common sight on moonlight nights to see a dozen or more of them marching in single file from Rhodesian gardens with melons tucked snugly under their arms. One white farmer, when driving some baboons out of his corn field, was insulted by a big male baboon, which grabbed an ear of corn and shook it in his face.

"The natives usually hail with joy the arrival of a swarm of locusts. They bag the insects at night when they are numb with the cold, boil them and eat them in the manner in which Americans eat potato chips. The white farmers keep the insects on the move by building fires. A poison is now being used effectively in destroying these pests.

RELY ON LORD FOR CROP

"The Boer methods are somewhat less primitive. The Boers sow corn broadcast, plow it under with single furrow plows driven by oxen, and then go into the house, get out the family Bible, and ask the Lord to bring forth the crop.

"In case the weeds become too rank a gang of natives, using crude hoes, is put to work in the field. The Boers are a hardy and hospitable people, but inclined to be ignorant and superstitious.

"The English farmers are progressive and are making every effort to use up-to-date methods. They buy American machinery. The government has established a department of agriculture and does everything possible to promote the farming industry.

COOLIES FARM INTENSIVELY

"The Chinese and Indian coolies practice intensive farming. They supply the towns with vegetables. The Chinese, particularly, are expert in market gardening.

"In the past, South Africa has not been a white man's country. The backbone of any territory consists of its working people. There is no place for the white laborer in Rhodesia. The natives do all the hard work. The chances are, however, that South Africa in general and Rhodesia in particular will advance rapidly at the close of the war because England will be dependent upon her colonies for foodstuffs."

MODERN BUILDINGS FOR KANSAS RURAL SCHOOLS

UP-TO-DATE TYPES ARE BEING RAPIDLY ADOPTED, BUT THERE'S STILL ROOM FOR IMPROVEMENT, SAYS EDUCATOR—LOCATION AS WELL AS CONSTRUCTION IMPORTANT

Kansas is rapidly adopting a thoroughly modern type of rural school building. Yet every year many districts build the old fashioned box type of schoolhouse, not because of unwillingness to conform to modern ideas but rather because of lack of knowledge of the real value of improved buildings and the inability to obtain the needed information concerning them. So says M. G. Kirkpatrick, home study department, division of extension, Kansas State Agricultural college.

"When planning a new schoolhouse it is important to consider the location of the building with reference to natural drainage, size, convenience, and accessibility from all parts of the district," said Professor Kirkpatrick. "Even though the district already may own a site, these points should be carefully considered before the new building is constructed."

THREE ACRES FOR YARD

"The school yard should be sufficiently large to enable all the children to play without interference with each other's games. At least an acre of ground should be provided for a one room school, but three acres is preferable. Even more spacious grounds should be provided for larger buildings. A growing demand for space for gardens makes more room necessary in modern school grounds."

"A well built schoolhouse is the most economical to maintain and increases the comfort of the pupils. The floors should be double, with one or two ply roofing paper between. The same material should be put between the sheathing and the siding. The cost will be insignificant and the increased comfort will be marked."

SEVERAL ROOMS ARE NEEDED

"A schoolhouse is by no means complete when a large classroom has been provided. Separate cloakrooms, a workroom for elementary woodwork or a modified domestic science class, as well as a specially arranged room which may be used as a community library, should all be incorporated in the design of the building."

"The size of the classroom is dependent upon the number of pupils to be accommodated and upon the use to be made of it for community meetings of various kinds. A room 22 by 30 feet, exclusive of halls and cloakrooms, will seat 35 pupils comfortably. It should be planned so that each pupil will have at least 16 square feet of floor space and 200 cubic feet of air space."

CEILING 12 FEET HIGH

"A ceiling more than 12 feet high is not desirable as it increases the cost of heating without any compensating advantages. The ceiling should not be much lower than indicated as sufficient air space may not then be provided."

"The cloakrooms may be placed in one end of the building, but should be easily accessible to the main entry. The library may be divided from the schoolroom proper by a glass partition, thus allowing the teacher to observe all pupils at all times."

BASEMENT IN EVERY SCHOOLHOUSE

"The workroom, the heating room, and the fuel room should be placed in the basement. The additional cost of providing this lower story is so slight that it is advisable to excavate under at least a part of every schoolhouse. Investigation shows that many school districts in Kansas are already putting furnaces in basements. The fuel room, naturally, should be near the heating plant, while the workroom may occupy any remaining space."

"A hot air furnace is not different in principle from the jacketed stove

and may be purchased at about the same price. The installation of such a heating plant saves considerable floor space in the classroom and eliminates all the dirt and ashes caused by the old fashioned stove."

CHIMNEY IS IMPORTANT

"An important detail in securing proper heating and ventilation is a correctly built chimney. The best possible shape for a chimney is round, yet a square opening is more often used. The top of the chimney should extend well above the highest point of the roof to allow a perfect draft."

"The windows should be placed on but one side of the room, and should be banked as close together as practical to produce the effect of one large opening. The window space should be at least one-fifth as great as the floor space of the room to be lighted. Less than this will not provide sufficient light on dark and cloudy days."

"The bottom of the windows should be at least as high as the tops of the desks. The reason for thus obtaining the source of light is to eliminate all cross shadows and also to throw the light upon the desks of the students and not in the eyes."

"One or two smaller windows may be placed in the rear to provide adequate summer ventilation, and additional light on dark days."

EAST WINDOWS ARE BEST

"North windows are best for lighting purposes, but windows in the east probably are best when everything is taken into consideration. It is desirable that direct sunlight be admitted into every schoolroom for a portion of each day. With windows in the north, this can not be done. The windows may or may not be shaded, as is required by the location."

"There are several kinds of artificial blackboard that give good service, but real slate is much more satisfactory for this purpose. Part of the blackboard should be placed within 28 inches of the floor for use of the small children, but most of it should extend high enough that work can be seen easily above the heads of the children sitting in the seats. The blackboards should be placed so that the source of light is directly opposite or at one side, but in no case should a blackboard be placed between the windows."

COLORS PLEASING—NOT BRIGHT

"The walls and woodwork in the room should be painted a pleasing color. Bright colors should be avoided in all cases. The ceiling should be much lighter than the walls, since it reflects or diffuses the light from the windows. Maps and pictures, as a rule, should be made as inconspicuous as possible."

"The source of the drinking water to be used in the schoolroom should be given rigid inspection at the opening of school each fall. The common drinking cup has been condemned and the open water pail in the schoolroom ought to receive the same treatment. Many kinds of portable drinking fountains may be secured, which will answer the requirements of the schoolroom very satisfactorily."

ADJUSTABLE SEATS DESIRABLE

"The seats for the pupils should be given more consideration than any other part of the schoolroom equipment. The latest type of schoolroom seat is so arranged that it may be moved easily about the room and also may be adjusted to the size of the pupil in but a moment's time. Desks of this type cost slightly more than the conventional single desks, but are much more practical."

"Many Kansas farmhouses are models of comfort and beauty. Surely the time has arrived when the people

of the state should interest themselves in school environment, and by well directed efforts afford an opportunity to the child to study under approved conditions."

HOTBEDS REQUIRE SPECIAL CARE FIRST THREE WEEKS

Attention Should Be Given to Ventilation and to Watering the Plants

Hotbeds require careful attention, especially the first three weeks after the seeds are sown, according to M. F. Ahearn, associate professor of horticulture in the Kansas State Agricultural college.

"The bed should be carefully ventilated during the warmest part of the day," said Mr. Ahearn. "Later in the season the glass tops may be left off during the day and replaced in the evening."

"One precaution to be observed in watering is not to allow the beds to become too wet. There is danger of dampening off and of cutting down the supply of heat. It is impossible to give any set rules for watering and ventilating the beds. Experience is the best teacher."

"After the heating process in the hotbeds has ceased, the old bed may be used for hardening off plants or growing late cabbage or celery."

"For home use a small hotbed three by six feet usually will produce enough tomato and cabbage plants for all ordinary purposes. For more extensive gardens larger hotbeds may be constructed on the same plans as a small one without great outlay of money."

SEARSON WILL TALK ON LOCAL NEEDS IN ENGLISH TEACHING

Is Only Kansas Man on Program of National Organization

J. W. Searson, professor of English in the Kansas State Agricultural college, is on the program of the National Council of Teachers of English, which will hold a special meeting in Kansas City, Mo., Friday. Mr. Searson will speak in the evening on "Meeting Local Needs." He is the only Kansas man on the program.

HALL WILL PUSH CLUBS IN GARDENING AND CANNING

Special Leaders to be Employed by Some of the Larger Towns

Clubs in gardening and the canning of vegetables for home use will be emphasized in the Kansas boys' and girls' club work this season, according to Otis E. Hall, leader.

Schools in some of the larger towns of the state will hire teachers to supervise gardening and canning work throughout the summer. Assistance to these leaders will be furnished as needed by the specialists of the division of extension in the agricultural college. Demonstrations in canning will be given."

CECIL FANNING TO GIVE CONCERT IN AUDITORIUM

Concert Baritone Will Appear in Closing Number of Festival Week in March

Cecil Fanning, America's greatest concert baritone, has been secured to give a concert at the college auditorium Sunday afternoon, March 18. This will be the last number of the program of festival week to be held March 12 to 18.

Mr. Fanning is recognized by the best critics of the east to be the greatest interpretative singer in the recital field. He is an artist in demand by musical circles throughout the country."

This concert by Mr. Fanning is the only number in the festival week that will be given by talent outside the community of Manhattan."

The opportunity to hear this great artist has been made possible by the efforts of the musical department of college. This number alone will cost the department more than \$300."

More silos and hay sheds are needed in Kansas. A larger effort must be made to save the roughage and the hay in the best possible condition.—Farmers Mail and Breeze.

IN SERVICE 12 YEARS

DOCTOR SCHOENLEBER RESIGNS AFTER LONG PERIOD ON FACULTY

Has Developed Course in Veterinary Medicine and Has Carried on Extensive Public Service Work—Is President of National Association

Dr. F. S. Schoenleber, for 12 years head of the department of veterinary medicine in the Kansas State Agricultural college, has resigned his position and will leave the institution March 1. He has not made public his plans.

Doctor Schoenleber holds bachelor's and master's degrees in agriculture and doctor's degrees in both veterinary and human medicine. For several years, he was teacher of agriculture in the Iowa State college, later becoming associate editor of the Orange Judd Farmer at Chicago. He was engaged for some years in private practice. He came to the college in 1905 as professor of veterinary medicine."

VETERINARY WORK ON INCREASE

While work in veterinary science had been offered in the college since the seventies, a full course in the subject was not installed until the coming of Doctor Schoenleber. The number of students in the department has steadily increased, as has also its field of service to the people of the state at large.

In 1907, two years after Doctor Schoenleber's coming, the veterinary building was erected. There are now 10 members in the veterinary faculty, and in addition to the course in veterinary medicine a combination course of six years is offered in animal husbandry and veterinary medicine."

CONTROLLING ANIMAL DISEASES

Doctor Schoenleber's work in the college has been marked by investigations leading to important results in the control of animal diseases. The serum plant maintained by the college was the second established in the United States. Before its erection, the annual loss from hog cholera in the state exceeded \$2,000,000 a year. The laboratories, though self-supporting, have done important experimental work in hog cholera control and have accomplished much in reducing the disease in the state. It is estimated that more improvement has been made in serum production by the college plant than by all other agricultural colleges in the United States combined."

A new method of combatting blackleg is the latest work of Doctor Schoenleber's department. This method will not only check actual outbreaks of this disease but will immunize animals from its attack."

Doctor Schoenleber's teaching work in the department has been chiefly in the courses of medicine offered to junior and senior students. He has for several years been president of the Association of State and Provincial Veterinary Colleges. He is popular on the faculty and among the people of Manhattan."

SWEET CLOVER FOR GOOD PASTURE IN SHORT TIME

Is Only Legume, Moreover, That Will Succeed on Much of Rough Land in State

No pasture crop can be grown in Kansas that will furnish a more satisfactory pasture in a shorter time after seeding than sweet clover, according to Ralph Kenney, assistant professor of crops at the Kansas State Agricultural college."

"Sweet clover can be pastured with as many animals per given area as any other crop grown in Kansas," said Mr. Kenney. "It is an excellent pasture for all animals but it is exceptionally valuable for hogs, sheep, and dairy cattle. Less bloat is caused from sweet clover than any other legume used for pasturing cattle."

"Sweet clover is the only legume which will succeed on much of the Kansas rough land. It is the only tame forage plant that is proving successful on much of the native pasture land. When plowed under, sweet clover returns as much nitrogen to the soil as any other legume which will grow successfully on that land."

"The maximum return from sweet clover is received within two years after seeding while that from alfalfa is not made until the third or fourth year. A farmer in Nemaha county seeded 20 acres in white blossomed sweet clover in April and on June 10, he turned 20 ewes and their lambs upon the crop where they pastured for the balance of the season. This is not an isolated instance. Hundreds of farmers in the eastern part of the state can give similar testimony."

"Sweet clover as a pasture crop in Kansas is past the experimental stage. Thousands of farmers have tried it and have become enthusiastic growers. Sweet clover is a good example of crops which were not grown because of prejudice. This prejudice arose in most cases from a lack of information regarding the true value of the crop."

IT PAYS TO RAISE SHEEP ON KANSAS STOCK FARM

Business Is as Safe and Attractive as Husbandry of Cattle, Horses, or Hogs—Flock Should Be Large

Raise sheep!

This was the advice of F. R. Marshall of the bureau of animal industry, United States department of agriculture, in an address before the members of the Kansas Sheep Breeders' association at the agricultural college."

"It is now time for the live stock farmer to make sheep raising one of his regular lines of production," said Mr. Marshall. "Putting aside the effects of war conditions, prospective values of lambs and wool render sheep raising fully as safe and attractive, to the man who will study and understand the business, as is the raising of cattle, horses, or swine."

"Prior to 1914 such a statement as this would not have been justifiable. Assured meat values of the future, the need of greater economy in the use of farm labor, and the full utilization of pastures place sheep raising in an entirely new light."

"Some agricultural journals and other authorities have been inclined to question the safety of engaging in sheep raising and base their ideas upon statistical facts of decline in popularity of sheep in eastern states. Such statistical deductions are entirely misleading, as nowhere is there an instance in the United States of a decline in a well established sheep husbandry based on the production of both meat and wool."

"The farm flocks that have disappeared in the past were raised primarily and almost entirely for wool production and beyond the fact that they were sheep had little in common with the kind of sheep that are now being placed upon American farms and that will be found in the near future on nearly all farms."

"An important feature in starting the sheep business is to work quickly into a flock of around 100 ewes, or a ewe for each two acres of the farm. The small flock which has heretofore been recommended for using weeds and waste feed, and incidentally as a small source of profit, is the flock that becomes diseased and because of its significance in the farm business, is certain to be neglected."

That a dog is a most religious animal in his special position, no man can doubt. Religion means the exhibition of logical reverence and love on the part of the inferior dependent creature toward the superior being on whom he depends, and nowhere amongst human beings, in all the churches or in all the lives of the saints, can we find a more perfect love to the Supreme Father in heaven than a dog shows to a kind master or mistress.—John Stuart Blackie.

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Number 21

TIME TO PRUNE GRAPES

PROMPT ACTION WILL SECURE MAXIMUM QUANTITY AND QUALITY

System to be Used Depends Largely on Form of Trellis Employed—Several Methods in Extensive Favor—Soil Is Factor in Care Necessary

Now is the time to prune grapes in order to secure the maximum quantity of the highest quality of fruit. This work should be done immediately, before the buds swell, according to F. S. Merrill, assistant professor of horticulture in the Kansas State Agricultural college.

"The vine that is left unpruned may produce more fruit than the vine that has been pruned, but the size of the bunches and berries is greatly diminished and the quality of the fruit is inferior to that of the well pruned vine," said Professor Merrill.

FRUIT ON NEW SHOOTS

"The fruit of the grape is borne on the new shoots which grow from buds formed on the preceding year's growth. The varieties vary somewhat in their behavior in different soils. In strong, heavy soils grapes usually succeed better if set at a greater distance and may be allowed to carry more old wood than when grown in poor, light soils.

"Upon the form of the trellis used will depend to a considerable extent the system of pruning required. Systems extensively used are four arm, Kniffen, six arm, fan, and Munson. For the hardier varieties of the American grapes the two-wire and four-cane trellis is largely used. When the plants are set they are cut back to one or two buds, but the growth the first year does not require a trellis. It is important to secure a strong growth of new canes.

VINES MUST BE KEPT STRONG

"The succeeding spring one of the canes should be left for training to the trellis and at the lower wire one or two canes should be retained to form horizontal arm upon which the fruit may be borne the following season. Any bunches of grapes that grow the first year should be sacrificed to promote the greater strength of the vines. If a vine is strong the second year the arms may be trained on the second wire, but in many cases one pair of arms will be all the vines will mature in the second year's growth.

"The following season the pruning will be restricted to the cutting back of the preceding year's growth on the second wire, and after these arms are well established the pruning will consist of cutting back the year's growth, leaving out a few buds. Subsequent pruning should be to remove all wood except sufficient wood along these arms to produce a maximum crop of fruit."

HOW MANY BUDS TO LEAVE

The number of buds to be left varies with the locality, variety, and strength of the vine, and the market for which the fruit is intended, points out Professor Merrill. Growers differ in opinion as to the number of buds to be left, some cutting back as close as 25 to 30 and others leaving double that number. In sections likely to have late frosts a large number of buds are left. If the first shoots are killed by frosts others will be produced on the slower buds and a fair crop may be produced.

The six arm system is similar to the four arm system with the exception that three wires and six arms are used. It is suitable for varieties that make a rank growth and for vines that are growing in strong soil.

FAN FOR HARDY VARIETIES

The hardy varieties, which include most of the hybrid grapes, are best grown on a fan trellis. This system consists of training from four to six arms over the wires so that they resemble a fan. There is not much old wood about this system. A little more inconvenience is experienced in gathering because the grapes are borne so low on the vines. The fruit, furthermore, is not so well colored in this system as in some of the other systems. Old canes should be removed each year and new canes trained by heading back as advised for the starting of new vines.

The Munson system, sometimes called the overhead system, has a different form of trellis. When this system is used the posts are four or five feet high and cross arms 18 inches to two feet in length are nailed to the top. Holes are bored in the cross arms and the wires are stretched through these holes for support to the vines. The third wire should be stretched either above or below the level of the wires that extend through the cross arms. The vine is trained to the middle wire and the canes are trained to the side wires. More of the fruit is exposed to the sunlight and the picking of the fruit is easy. Cultivation also may be carried on readily under this system.

Plant more strawberries. There are many localities in Kansas where the soil is adapted to the growing of strawberries, in the opinion of M. F. Ahearn, associate professor of horticulture in the Kansas State Agricultural college.

MORE BERRIES IN KANSAS

MANY LOCALITIES ARE SUITABLE FOR GROWING THEM

Almost Any Soil Can Be Put into Condition for Strawberries, Says Horticulturist—Suggestions for Growing the Fruit Successfully

Strawberries demand a moderately rich loamy soil for the best success, but they are being grown in a wide range of soils and conditions, pointed out Professor Ahearn. Almost any soil can be put into condition for strawberries.

It is preferable to set the strawberries in the spring in most instances. The plants which produce the fruit are the ones which form the previous season, and the work of the grower is directed to securing a sufficient number of good plants each year.

NEW BEDS ARE BEST

New varieties are grown from seed but all are propagated from runners. Plants are best grown in new beds, and if they are taken for setting from old beds, special care should be used to get the young thrifty plants. Where space is abundant they are grown in rows four feet apart in what is known as the matted row system.

The ground should be thoroughly and carefully prepared. Usually it is best to set the plants in the early spring, but conditions may change. If the ground is dry and the weather is bad, it is best to wait until later. The only plant worth anything is the one that grew the year before.

SHOULD BE CULTIVATED OFTEN

In setting plants in rows, care must be taken that the roots are well spread, and that the crown is high enough that the earth will not be washed over the buds. The plants are usually set 12 to 18 inches apart, according to variety. Leaves and roots are often clipped. After the plants have been set they should be given frequent and thorough cultivation.

Runners should be cut off until the plant is well established—the last of June, unless the weather is especially favorable. Blossom buds should be removed as soon as they appear for the first season as the bearing of fruit is almost certain to exhaust the plant. It is well to prevent the plants from setting too thickly during the late summer and fall. Unless the soil is especially rich, plants should be six inches apart.

MULCH NEEDED THROUGH WINTER

As soon as the ground is well frozen the bed should be mulched with straw or hay. Stable manure may be used on thin poor soils. Whatever the material, it should be well shaken out and spread evenly to a depth of three to four inches. Care should be taken to see that it is free from weed seed. The object of the mulch is to prevent sudden changes in the soil temperature. Frequent freezing and thawing is an unfavorable condition for a strawberry bed, causing heaving.

In the spring, as soon as danger of freezing is past, the mulch should be raked off the row to the middle, leaving sufficient straw to protect the fruit from being soiled by the earth, according to Professor Ahearn. Weeds should be kept pulled. Care must be taken in pulling them not to scatter soil on the fruit.

TO RENEW THE BED

After the crop is picked the preparations for the renewal of the bed should be made. If the stand is poor they may be hoed out, cleanly cultivated, and mulched in the fall as before.

AGGIES ARE CHAMPIONS

The Aggie basketball team bounded into undisputed championship of the Missouri valley conference when it succeeded in twisting the tail of the mighty Missouri Tiger for two games at Columbia Monday and Tuesday by scores of 26 to 22 and 32 to 27, respectively. The Wildcats have won their last 10 games, the final four being on foreign courts. The games at Missouri closed the season for the Aggies.

This championship is the first ever held in the Missouri valley conference by the Aggies. The football team last fall tied for first place.

It is the last year of playing for two men on the Aggie team, Captain MacMillan and Reynolds graduating this year. The other members of the championship team are Wells, Van Trine, and Fullington.

PRIZES TO BOY FARMERS

GIRLS ALSO WIN AWARDS IN KANSAS CLUB CONTESTS

Enrolment Between 4,000 and 5,000—Seventy-five Premiums Given on Basis of Yield, Profit, Exhibit, Record, and Story

Awards in Kansas boys' and girls' club contests have just been announced by Otis E. Hall, state club leader. Between 4,000 and 5,000 boys and girls were enrolled last year. Seventy-five prizes were awarded by the Kansas Bankers' association on the basis of yield, profit, exhibit, record, and story.

Albert Robinson of Leavenworth county won the state championship in corn raising by producing 83 bushels of white dent corn on an acre. Karl Rossman of Miami county won first prize in the yellow dent contest with a yield of 67 bushels per acre, and Maynard Reb of Marshall county the sweepstakes prize for the best 10 ear exhibit at the Kansas State Agricultural college in Farm and Home week.

AWARDS IN CORN CONTESTS

Other awards are as follows:

White dent corn contest—Maynard Reb, Marshall county; Ed Collins, Cloud; Karl Collins, Cloud; Carl Hale, Leavenworth; Carl Brothe, Miami.

Yellow dent corn—Karl Rossman, Miami; Chester Rowe, Marshall; Wymand Maris, Miami; Morris Rose, Jewell; Bernard Sawyer, Jewell; Chalmers Walker, Atchison.

Best exhibit of any variety of corn grown in western Kansas—Teddy Bourquin, Thomas.

Kafir—Nathan Horton, Ford.

Feterita—Franklin G. Hull, Gray.

Milo—Earl Livengood, Finney.

GIRLS WIN WHEAT PRIZES

Hard winter wheat—A. Browne, Pawnee; Nathan Horton, Ford; Miss Mary D. Brooks, Scott; Miss Grace Kitner, Edwards; Homer Reed, Riley.

Soft winter wheat—Miss Mollie Brox, Atchison; Claude Currence, Riley; Miss Anna Brox, Atchison; Frank Horslek, Marshall; Carl Hall, Leavenworth.

Potatoes—Warren McKinley, Lyon; Carl Hall, Leavenworth; Louis Etherington, Greenwood; Homer Russell, Scott; Magnus Mowery.

MANY AWARDS FOR SEWING

Sewing, class B—Miss Laura Claxton, Lyon; Miss Una Morlan, Republic; Miss Hazel Dawson, Wabaunsee; Miss Mildred Gehrett, Jewell; Miss Alta Bland, Miss Faye Steele, Finney; Miss Gertrude Noon, Jewell.

Sewing, class A—Miss Florence Winkler, Wabaunsee; Miss Thelma Hull, Jewell; Miss Inez Putman, Lyon; Miss Alice Henning, Ford; Miss Ruth Bowman, Thomas.

Best single garment, class B—Miss Cecille B. Paine, Lyon; Miss Katie Lickteig, Anderson; Miss Mary Wortman, Ford; Miss Olive Bland, Finney.

Best single garment, class A—Miss Thelma Green, Jewell; Miss Elnora Carson, Wabaunsee; Miss Emma Metz, Finney; Miss Vera Coad, Jewell; Miss Maggie Lickteig, Anderson.

Bread—Miss Mary Scarbrough, Miss Maggie Lickteig, Miss Katie Lickteig, Anderson; Miss Mary Wortman, Ford; Miss Elizabeth Hoss, Finney; Miss Hilda Wilke, McPherson; Miss Cecil Byer, Gray; Miss Jennie Smith, Rice; Miss Grace Kitner, Edwards.

Canned fruits—Harry Payton, Scott; L. E. Toland, Woodson.

Oil mills on the Pacific coast have been operating for several years with soy beans imported from Manchuria and have found a ready sale in that region for the oil, cake, and other products.

fore. Where a good stand has been secured, the best plan is that of cutting down the row. In a small bed, a garden line is stretched in setting the row over. The ground should be cultivated thoroughly. If plants are at all affected with fungus or insects, it is well to mow them and remove the tops from the patch. Thorough cultivation and thinning must then be given as for a new bed. This renewal may be kept up indefinitely, but when berries are grown in a commercial way, it is not usually profitable to let the bed stand more than three years.

The blossoms of many varieties are imperfect, lacking the stamens, and it is necessary to plant near these some variety which produces an abundance of pollen and which will blossom at the same time. Good varieties to plant, in this locality, are Senator Dunlap, Klondike, Gandy, and Grand Marie. The strawberry is one of the most profitable and certain of fruits.

PROGRAM ARRANGED FOR ANNUAL FESTIVAL WEEK

Concerts, Opera, and Play Will Be Features—Rapid Progress Being Made in Preparing Entertainments

The program for festival week which will begin Tuesday, March 13, and end Sunday evening, March 18, has been definitely arranged and work is going rapidly forward in preparing the numbers for presentation.

The first entertainment of the week will be a concert at 8 o'clock Tuesday evening by the college orchestra. Under the direction of R. H. Brown, professor of violin, the orchestra is preparing an entertainment which is expected to uphold its reputation as a high class musical organization.

"Robin Hood" will be presented by the Apollo club and the girls' glee club Friday night. This is in the light opera class and its presentation is seldom attempted by local organizations, according to A. E. Wesbrook, director of music.

"The Man from Home," a four act comedy, will be presented at 8 o'clock Saturday evening under the direction of Dr. J. G. Emerson, head of the department of public speaking.

Cecil Fanning, concert baritone, will give a concert at 2:30 o'clock Sunday afternoon. He is recognized by critics to be the greatest interpretative singer in the recital field.

The last number of the program of the week will be a sacred concert at 7:30 Sunday evening by the college choral society. The chorus has a larger enrolment this term than last and the work is progressing rapidly. The music of this concert is not difficult and is of a graceful nature that lends itself well to a chorus of this size.

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WEDNESDAY, MARCH 7, 1917

WHAT IS YELLOW JOURNALISM?

Everyone who writes news knows the typical structure of the news story. It starts with the lead, containing the most important or the most striking point to be stated. The rest of the story justifies and elaborates the lead.

The "yellow" story starts with a good lead, a lead with plenty of snap and punch. When one has finished reading the story, however, one feels tricked. The facts, the details, in the story, have not seemed to justify the lead, or else there is something about the story which leads the careful observer to doubt its authenticity. Yellow journalism is the type of journalism which throws emphasis upon the trivial, and which, moreover, tends to write first and investigate afterward.

The application of the term "yellow journalism" to any type of journalism which offends one's individual taste is wholly unjustified. Big heads over insignificant stories, pictures illustrating trifling incidents, are yellow journalism. But big heads, many pictures, have in themselves no essential relation to yellow journalism. Likewise with muckraking articles, so often referred to as yellow journalism—chiefly, it is to be observed, by persons in whose business stables there is much muck to be found. The muckraking article is yellow journalism when it deals with fancied evils or when the promise of real disclosures is not fulfilled. Yellow journalism is simply the journalism that fails to deliver the goods.

FARMING IN ALASKA

Alaska has never been thought of by the ordinary person as an agricultural region and it is not primarily such, yet it should be capable of supporting a population nearly equal to that supported by the agricultural products of Pennsylvania, Maryland, Delaware, New Jersey, Connecticut, Massachusetts, Vermont, and New Hampshire. So says C. C. Georgeson, formerly professor in agriculture in the Kansas State Agricultural college, now agronomist in charge of the Alaskan Agricultural Experiment stations. In a most interesting pamphlet, "Information for Prospective Settlers in Alaska," Mr. Georgeson points out clearly and in a particularly pleasing way the opportunities, the difficulties, and the agricultural future of the northernmost portion of the United States.

The variation in climate in Alaska is one of the features which impress the reader of the bulletin. There are places on the coast where the temperature never goes above 76 or below 7 degrees, while at Copper Center, in the interior, the maximum temperature is 96 degrees and the minimum 74 degrees below zero. At several points on the coast, too, the rainfall exceeds 160 inches a year while in the interior it runs from nine to 13 inches.

"From the standpoint of health," writes Mr. Georgeson, "the Alaska climate is exceptionally favorable. The air is pure and bracing. The winds sweep over the sea, virgin forests, or snow-covered mountains. They carry no contaminating disease germs. The native Indians, due to their insanitary modes of life, suffer from tuberculosis and from an occasional epidemic of smallpox; but the white population is more exempt from such diseases as pneumonia, grippe, and typhoid than in the States. Men who are much exposed sometimes contract rheumatism, and stomach troubles occasionally result from a too prolonged unvaried diet of canned foods."

Most of the agricultural land in the territory is in the interior. A total of probably 100,000 square miles can be made available for tillage and for grazing purposes—about half being useful for each purpose. The soil is not particularly good. Alaska is not a corn and wheat country, but oats, barley, rye, and buckwheat may be grown. White clover survives the winters and certain hardy varieties of alfalfa are successful. All the tame grasses will grow but smooth brome grass has been found best. These statements apply to the interior of the territory, the coast region being suited particularly to market gardening and to the growing of silage crops useful in stock raising and dairying.

A settler is allowed to homestead 320 acres. It usually has to be cleared. The cost of transportation to and from places in Alaska is exceedingly high. Building materials are expensive as food is also, though on plain fare a man can live on \$1 a day at almost any point in the interior except in remote mining camps.

Most of the Alaskan settlers are of the hardy pioneer class, largely Scandinavian. The establishment of many comfortable homes is expected within the next few years.

KANSAS BROOM CORN

The broom corn trade is casting all interest in the direction of the new 1917 crop, as practically nothing is available except from this new crop. Early indications show that a good acreage is being put out and much seed is being shipped in. Most of the corn planting will be done this month as February has been too cold for seeding. Growers of the southwestern country have put through one of the driest winters that the southwest has ever experienced.

It is now very certain that no more broom corn is in stock and nothing will be found in farmers' hands whatever.—Broom Corn Review.

ABUSED SUPERLATIVES

It is hard to make people understand that the adjective almost invariably weakens the noun, and that the word "very," for instance, does not strengthen a statement, but qualifies it. A good example might be taken from the august communications of our president, who weakens the word "sincere" by saying "very sincere." But the use of the superlative is even more abused. We talk of the "unimpeachable" honesty of somebody or other, knowing perfectly well that anybody's honesty may be impeached. What seems to be required is a readjustment of our habits of thought, and better teaching of the value of words and even of the usefulness of grammar. A superlative necessarily involves an axiom. It commits you, like saying the sum of the angles of any triangle is equal to two right angles. Your dilemma arises when you try to prove it. "Impregnability" and "invulnerability," and all the other superlatives in such general use are posing as axioms when they are mostly fallacies.—Wall Street Journal.

MODERN HOME MAKING

It is only too obvious that the conditions of rural life will not be much better until the rural home has more comfort, more pleasure, and the opportunity for more refining influences and educational progress such as all parents desire for their children.

The best all around development in agriculture should come normally from the united efforts of men and women and the center from which such effort should radiate is the home.

In the main, the practical side of agriculture is overstressed, and not sufficient attention is given to both the esthetic and ethical value of the country environment which affects so strongly both children and adults and needs emphasis particularly in connection with the growing interest in increasing the number of rural homes. The right kind will be developed in greater number only in proportion to the idealism and broadening of vision that can be brought to lighten the present difficult task of making the rural home.

His heart warms toward his father, and also toward his praiseworthy activities.

In a day or so the mistakes, if there are such, may be brought up and kindly discussed and corrected privately, with much better effect on the boy and with far less danger of hurt feelings or of arousing a rebellious mood in his breast.

Healthy, full fed, lusty farm boys are easier led than driven. Well earned, tactfully delivered words of appreciation provide a potent leading string.—Farm and Fireside.

IN DEFENSE OF THE CATFISH

The catfish is horning into print. He sticks his head through the editorial page of the Portland Oregonian only to get it rapped soundly by our

Tolerance

Dr. J. T. Willard

We are living in a time of most portentous import. No generation of men has been subject to a strain of adjustment that compares at all in intensity with that which tests our own powers of adaptation. The changes in modes of production, in the products of industry, in means of transportation, and in means of communication, have made the earth such as would be scarcely recognizable by Napoleon Bonaparte or Benjamin Franklin. All of these changes impinge upon mankind in the physical, mental, and moral nature of the individual, and in the organized relations of his social, religious, economic, commercial, and governmental life. The changes have come with overwhelming speed. They are due to the discoveries of modern science, in which more has been accomplished since 1776 than in all preceding time. The individual nations in their internal life are but partly adjusted, and fortunate will be that people which is so wisely conducted that it reaches adjustment without bloody civil strife. The conflict between labor and capital is irrepressible; the issues between the landed and the landless will become more poignant, the relation of debtor and creditor more perplexing, and the clashing of races and classes more evident. Economic justice is the only way to salvation, and what constitutes such justice? That can never be attained save by tolerance for all by all. As tolerance is an attitude of mind and soul it can be manifested in the highest degree by none but the most developed individuals and peoples, and, without doubt, in preservation of themselves and others, they will be obliged to repress the aggressions of the intolerant and the savage.

In seeking friendly aid and suggestions on these problems, let us consult a few good books which indicate plainly some of the whys and wherefores involved in building up the happy, efficient and progressive farm home. Every individual who takes an interested share in this problem is making a definite contribution to the field of the new agriculture, which means agriculture with a cultural side for the individual as well as for the plant.—Agricultural Digest.

DAD'S APPROVAL

In the successful management of boys and young men on the farm an expressed appreciation of duty well performed is a factor often overlooked. Flattery is fatal. Unmerited praise is a sham quickly exploded, which in bright minds excites suspicion. On the other hand, frank, moderate commendation of earnest effort, which in justice deserves to be noticed, is welcomed by and is the due of every normal person.

Fathers often grow into the habit of fault-finding quite unconsciously when really they are only trying to teach better practice. Of course, mistakes hurt. And these mistakes must be pointed out in order that they may not be repeated. But it should be done with wisdom.

There are some farm fathers who after a few days' absence from home always make a tour of the barns and fields in search of features they can praise. These points for praise are then brought to notice in the presence of the family circle, at the table, or around the evening lamp. Under such treatment the spirit of the boy whose good work is thus recognized glows.

neighbor, the Times, who avers that the only way he ever gets upon even the poorest dinner table is by default. The slur plainly cast is to the effect that nobody will ever eat catfish if there is any other food whatsoever to be had.

This merely goes to prove how grossly ignorant even the most solemn in demeanor and oracular in expression may be. The catfish's bad name as a scavenger has brought him properly into ill repute in districts long settled, but whoever has not tasted of an "upstream cat," baked to a turn, with "stuffin'" of bread crumbs seasoned to perfection with parsley, sage and all manner of fine "yarbs" which the old negro cook—the only one for this dish—knows how to mix in exactly the right proportion, has something to live for. The meat is firm and sweet, provided the stream the fish is taken from is not too muddy. Baked catfish is indeed in no wise inferior to baked shad.

Such a feast as that giant "cat," weight twenty-six pounds, hauled recently from the Cottonwood river, at Cottonwood Falls, out in Kansas, must have made! And think of the inexhaustible supply of savory "stuffin'" that must have been packed into its capacious maw! The only way to cook such a mommoth specimen is to barbecue it like an ox. And all those who scoff at the suggestion of catfish for dinner should be seated to partake of it. What we have never been able to comprehend is why when there are regular fisheries to raise as coarse a product as the carp for the market nobody has recognized either the commercial possibilities or the comestible excellence of the humble "cat."—New York Sun.

OBIIT

Mahlon Leonard Fisher in the Midland

I cannot think of you as dead,
Though all is done and all is said.
You never dared to brave the dark,
And, Darling, in the grave no spark
Lights up the gloom of All-Below.—
Who lulls you in the long night?..Oh,
I cannot think of you as dead,
Though all is done and all is said.

SUNFLOWERS

A word from the wise is asphyxiating.

Next year's shoes will be provided with joints at the knees.

It seems unfair that long headed people should also be broad minded.

Advice to a young man on the choice of a wife: Take whatever gets you—and smile.

There's only one thing more terrible than unrestricted submarine warfare. And that one thing is unlimited debate.

What has become of the o. f. wife who used to surprise her husband about three times a year with hot biscuits for breakfast?

It is charged that the governor of Texas has used state funds for the purchase of a ukelele, which is really the most awful crime we have heard of recently.

A QUARTER CENTURY AGO

Items from The Industrialist of March 5, 1892

The Webster annual will be given March 12.

Many students are dropping out of the course to begin spring work on the farm.

F. A. Marlatt writes in this week's Capital on "A Sprayer for Fruit Growers."

A. A. Mills, '89, writes of energetic work at the Utah Agricultural college as agriculturist of the station.

President Fairchild was in Topeka Thursday and Friday. Professor White took charge of the logic class.

C. W. Thompson, '89, sends an announcement of the commencement exercises of the Kansas City Dental college this month.

Miss Marie B. Senn, '90, writes from Enterprise hoping to take postgraduate study here after her school closes in the spring.

Miss Bertha H. Bacheller, '88, writes from Sterling in behalf of one of her pupils who intends coming to college next year.

One of the chemical fire extinguishers is being converted into a hose reel of considerable capacity, and the other is being repaired.

Jacob Lund, '83, writes from Sidney, Wash., with a longing to return to college work after his six years of experience in other fields.

The Epworth league gave an entertainment at Eames hall Friday evening in the character of a whittling bee. A large number of students were present.

The workers in brass are making a host of pretty trinkets during their practice hours, among which are paper weights and paper knives of various designs, drawer pulls for the library catalogue cases, etc. The largest casting of bronze weighs 25 pounds, and is without a flaw.

Friends of the college will be glad to know that the successors to Regents Caraway and Hessin are men of liberal education as well as recognized ability in the callings. Mr. Chaffee is putting a classical training into use upon his farm in Lyon county. Mr. Kelley, an enterprising lawyer in Greenwood county, is a graduate of the Iowa Agricultural college, from the English and agricultural course. Both come to their duties in our college well equipped by both training and experience for a genuine interest in the advancement of agricultural education.

AMONG THE ALUMNI

Shelby Fell, '15, is with the H. H. Franklin Automobile company, Syracuse, N. Y.

A. E. Engle, '11, who is farming near Filer, Ida., was a recent visitor at the college.

Miss Mary Bright, '16, is teaching domestic science in the high school at El Paso, Texas.

Harry Vaupel, '16, has accepted a position with a mill and elevator company at El Reno, Okla.

Robert D. Van Nordstrand, '12, is a designing engineer for the General Electric company at Schenectady, N. Y.

Miss Grace Allingham, '04, is managing a tea room in Los Angeles, Cal. She writes that she is pleased with her work.

Bert McFadden, '11, a stockman of Stafford, attended a sale at the college and visited with friends until Sunday.

R. W. Edwards, '11, is superintendent of substation 12 of the Texas Agricultural Experiment station, at Chillicothe, Tex.

Lewis L. Bouton, '11, and Mrs. Myrtle (Hayne) Bouton with their two sons are living in Leonia, N. J., where Mr. Bouton is in the transmission engineering department of the American Telephone and Telegraph company.

C. C. Georgeson, formerly professor of agriculture in the college, is author of a 32-page illustrated pamphlet, "Information for Prospective Settlers in Alaska," issued by the Alaska Agricultural Experiment stations. Mr. Georgeson is agronomist in charge in Alaska.

Miss Alma McRae, '06, is teaching domestic science in the Indian school at Chillicothe, Okla. In the February number of the Indian School Journal is an article written by Miss McRae entitled, "Second Term Theory Work." The article is concerning second year domestic science classes.

Harrison Broberg, '11, who has during the past few months been employed in the state engineer's office on highway surveys, has just accepted a position with the E. B. Murray Company of Kansas City. Mr. Broberg will have charge of the surveys on drainage district 1, Osage county.

The civil engineering department is in receipt of a letter from S. A. McWilliams, '10. He is now an assistant engineer in the United States reclamation service and is at present employed on the location of a portion of the Fort Laramie canal of the North Platte project. He was, until recently, at Malta, Mont.

BIRTHS

Born, to Mr. John Sieglinger, '15, and Mrs. Sieglinger of Woodward, Okla., in February, a daughter.

Born, to Mr. Robert D. Van Nordstrand, '12, and Mrs. Amelia (Pierson) Van Nordstrand, '12, of Schenectady, N. Y., on February 17, a son.

MARRIAGES

REYNOLDS-JORDAN

Miss Juanita Reynolds, '16, and Mr. Donald Jordan, '16, were married February 27 at the Kappa Kappa Gamma house in Manhattan. The Rev. S. B. Moore, pastor of the First Christian church, officiated. Only members of the Kappa Kappa Gamma sorority and of the Acacia fraternity were present.

Mr. and Mrs. Jordan will live in Topeka, where Mr. Jordan is assistant dairy inspector.

PROFIT IN FEEDING LAMBS

Omar O. Browning, '16, of Linwood recently sold more than 340 lambs at a profit of \$3.75 each, after feeding them for but a few months.

Mr. Browning bought 341 lambs of an average weight of 54 pounds at \$9.75 a hundredweight. He sold them at \$14.10 a hundredweight when their average weight was 82 pounds. He topped the market for Kansas fed lambs on the date on which he sold them.

The lambs were on pasture from September 25 to November 1, when they were put into feed lots. They ate 590 bushels of corn and 15 tons of alfalfa hay. Mr. Browning provided them with plenty of salt and pure water at all times. He lost four lambs on pasture and three in the feed lot—less than 3 per cent, which is generally considered an average loss.

STAR FEATURES BURTIS

A two-column feature article on "The Best Farmer in Kansas" in a recent issue of the Weekly Kansas City Star tells of the work of W. J. Burtis, '87, of Wilson county. The article is illustrated with pictures of Mr. and Mrs. Burtis and scenes on their farm.

"Mr. Burtis," says the Star, "graduated from the Kansas Agricultural college in 1887, married, and became a farmer. Mrs. Burtis also had spent three years in the Kansas Agricultural college studying home economics, equipping herself to be a real partner in the farm life. That partnership has been so successful that the farm and home life of the Burtis family is recognized as nearer ideal than any other farm home in the state.

"They are real partners in everything, even in the selection of a name for their farm. The farm name is Walwin Stock farm, a combination of his name, Walter, and her name, Winifred.

"Another big point in favor of the Burtis family is that they recognize education as one of the big factors of success. An educated community is a successful community, and to build a successful community life there must be good schools and a live community spirit, they say. Those things come largely through education, the college has found. The college authorities take as an example the fact that not only Mr. and Mrs. Burtis are graduates of the college, but that they have a son and daughter who graduated last year from the agricultural college and have returned to farm communities to aid in the work of community building. Their son spent five years in college, mastering the science of animal husbandry, as well as crop farming and soil building. The daughter is a teacher of domestic science in a high school attended principally by girls from farm homes. Three other daughters are to follow in her footsteps.

"Building an attractive home, beautifying the farm premises, building up the fertility of the farm soil, paying the expenses of a son and daughter in college, taking an active interest in good roads, schools and keeping up the community spirit and at the same time maintaining a family of five on the farm, all from ninety-eight acres, isn't a very small undertaking.

"But Mr. and Mrs. Burtis, with the cooperation of their children, have made it a distinctly successful undertaking and they are known in and out of that district as happy, successful farm people."

FEBRUARY WAS JUST ABOUT A REAL BONE DRY MONTH

Least Rainfall in 47 Years, Points Out Professor Hamilton

February was the driest February in 47 years, according to the weather report issued at the Kansas State Agricultural college by J. O. Hamilton, professor of physics. The precipitation was .05 of an inch—in both January and February it amounted to only .35, or 1.13 inches below the average.

The highest temperature for the month was 74 degrees on February 22, which, with but one exception, was the highest temperature for the month as shown by the 58 years' records kept at this station. The lowest temperature for the month was 12 degrees below zero on February 1.

GOOD CARE IS NECESSARY IN OPERATING INCUBATOR

College Poultry Specialist Gives Timely Advice Relative to Operation of Egg Hatching Machine

Good care is absolutely necessary in obtaining satisfactory results in the use of the incubator, according to T. S. Townsley, assistant in poultry husbandry in the Kansas State Agricultural college.

"The eggs should be turned every day or twice a day if possible, for the first 18 days," said Mr. Townsley. "It has been found to be an advantage to turn the eggs twice a day. Turning the eggs prevents the contents from sticking to the shells. They are moved about to overcome the effects of unevenness in temperature in different parts of the machine. The eggs should be cooled every day after the third day until they feel cool to the eyelid.

"The eggs should be candled on the seventh day to take out those that are infertile and again a week later to remove allegis containing dead germs. It is an advantage to candle the eggs often to watch the size of the air cell which is an index to the evaporation of moisture from the egg. A good way, if possible, to get accurate results in candling is to compare an egg set in an incubator with an egg set under a hen the same length of time.

"The directions for controlling moisture which come with every machine should be carefully followed. If the evaporation from the egg seems to be too rapid, more moisture should be supplied by putting a tray of moist sand in the bottom of the machine or by sprinkling the eggs with a little luke warm water.

"On the eighteenth day the incubator should be closed and not opened for turning or for any other reason until the hatch is complete. The success of the hatch depends not so much upon the make of the incubator as on the vitality of the eggs and the care given by the operator."

BIG CROP PROBLEM IS MET BY GAS TRACTOR

More Than 125 Factories Make These Engines, Says Specialist in Farm Motors

The farmer of today faces the problem of raising more crops than he has ever produced before, according to W. H. Sanders, instructor in farm motors, who gave an illustrated lecture before student assembly Friday morning.

"To meet this problem of increased production, the farmer must have more power for the cultivation of crops," said Mr. Sanders. "Six horses is the maximum number that can be handled by one man and this number cannot give sufficient power. The gas tractor is rapidly coming to fill this lack of power because of its great amount of pulling strength and because it can be easily operated by one man.

"The gas tractor is being used more extensively in the wheat belt because it makes possible the cultivation of more than could be cultivated by horses. The gas tractor is rapidly replacing the steam engine in threshing because there is less danger from fire from a gas engine.

"Another important use of the gas tractor is in road building. A tractor can easily pull two road graders. With the agitation for good roads in Kansas the system of using tractors in grading should appeal to every man. In cities the tractor is used in removing earth from the streets where paving is to be laid. By the use of a machine to elevate the dirt into wagons a section of earth one foot thick can be removed from the top of the roadbed. The tractor is used in cutting drainage ditches on flat land at a smaller cost than any other excavating machine.

"The caterpillar wheel is an important feature in the use of the tractor. There is undoubtedly a great future for this style of wheel. It is valuable because it enables the tractor to work in rough ground. The value of the caterpillar wheels has been shown in Europe where they are being used on

tractors by the warring countries to move large guns.

"The extensive use of the tractor is shown by the large number of tractor factories in the United States. At present there are perhaps more than 125 of these factories in this country. Enormous orders for tractors are being placed in our factories by European countries for the cultivation of this year's crops."

MORAL INSTINCT GUIDE IN CHOICE OF FRIENDS

One May Do Great Work but Can't Be Noble Character Without Love, Says Doctor Fisher

There is one general principle—moral instinct—which will invariably aid one in choosing friends, according to Dr. Drury Hill Fisher, pastor of the First Presbyterian church, who spoke to the students of the college on "My Friends."

"A code of rules to be followed in choosing one's friends would be impracticable," said Doctor Fisher, "but there is a general principle which can be followed—let the moral instincts decide. There is something in every pure girl that tells her when she is in the presence of a bad man.

"The stanchest friendships are founded on cleanness. The soldering of tin requires that both pieces be perfectly clean before the solder is applied. The greatest discovery in medicine was the discovery of dirt. Once recognized, it was removed so that normal development and recovery might be brought about. In the same manner the stanchest, most wholesome friendships are clean friendships.

"I don't suggest pious talking. But David and Jonathan—don't smile—prayed for each other. They were better men for knowing each other. So should you be a better man for your friendships.

"I can think of one doing a great work, perhaps occupying a great place in history, without love. But that man is not a noble character. Napoleon Bonaparte was an example of that type. The best man, the greatest man, needs true friendship.

"The college circle makes it possible to meet many people. We perhaps meet more people than we would in any other sort of community. But you should not let your friends build your world for you. Acquaintances, good or bad, will respect you for drawing certain lines."

HOT AND COLD BATHS ARE NOW MUCH USED INSTEAD OF DRUGS

They Are of Value in Keeping Body in Healthy Condition

Hot and cold baths are now being widely used instead of drugs as treatment for disease, according to Miss Loula Kennedy, instructor in domestic science in the Kansas State Agricultural college.

"Baths are of value in keeping the body in a healthy condition," said Miss Kennedy. "A bath with temperature of 80 to 90 degrees is advised for most persons.

"The hot bath as a treatment of disease usually should be given only on recommendation of the doctor. It is used for treatment in case of convulsions in children and as a diaphoretic in breaking up colds in the early stage. It has an enervating effect on the body, and brings the blood to the surface. After a warm bath, the patient should be placed in a warm bed and allowed to cool gradually. If the bath is used for cleansing purposes, it should be followed by a cold bath."

Whether the cold bath is advisable must be worked out by each individual, points out Miss Kennedy. The effect must be judged by the reaction at the time or later on. A cold bath must be taken when the body is warm and it must not be prolonged. It should be followed by a rub down with a coarse towel. No bath should be taken for an hour or more after a meal.

The cold sponge and cold pack may be given in disease as a treatment for fever and for nervous cases, but only on the orders of a doctor.

BUT ONE TRIP A MONTH

WAR CORRESPONDENTS TO FRONT AT INFREQUENT INTERVALS

Government Keeps Newspaper Men Out of Unsafe Places, Says Doctor Patterson—Scarcity of Stock Cuts Paris Sheets to Minimum

Information for detailed stories of the Great war sent to the United States by correspondents from this country, is obtained as a result of one trip a month to the battle lines of the belligerents, according to Dr. David L. Patterson, professor of European history and vice dean of the college of liberal arts in the University of Kansas, recently a war correspondent in France for the Pittsburgh Gazette Times. Professor Patterson gave a most interesting address here under the auspices of the industrial journalism department of the college.

"Formerly several trips a month were made to the battle fronts with groups of war correspondents," said Doctor Patterson, "but now only two trips are made each month and no one is allowed to go twice in the same month. Sectors where no severe fighting is taking place are visited. Correspondents are not allowed within five miles of those sectors where heavy bombardment is going on. They would stand little chance of returning alive."

NEWS MOSTLY FROM CAPITALS

Doctor Patterson explained that American war correspondents have regular city beats to cover to obtain news for their respective publications. They visit offices and interview soldiers at the railway stations to secure information. French and English newspaper men, however, are at the front almost continuously.

"The European war is undoubtedly the biggest story in world history," said Doctor Patterson. "To my mind the work of the newspaper reporter and that of the historian are closely associated. Newspaper reporting is the work of the historian of current events."

CAN'T COVER BOTH SIDES

"My trip to Europe was made for two reasons, first to learn by actual observation the conditions existing in Europe and second, because of the newspaper germ which cannot be eradicated from my system.

"I got my commission as a war correspondent from an eastern paper with which I was formerly connected, and with this secured my passport, which is absolutely necessary in time of war. A passport cannot admit one to opposing belligerent countries. Mine gave me permission to travel in allied territory, because it is easiest to enter and leave, and I had to return to America in September."

NO CORRESPONDENTS INJURED

Letters to prominent newspaper men in Europe were carried by Doctor Patterson. The first stop in belligerent territory was at Liverpool. When crossing the English channel the boat was held for three days because of the presence of submarines in the harbor.

"My war correspondent's permit was all that was needed on my trips to the battlefields," said Doctor Patterson. "This was obtained from the French press bureau. I was impressed by the care taken of war correspondents by a nation engaged in a life and death struggle. In all this gigantic conflict along the western front the newspaper men have been safe. So far as I know, no newspaper man has been killed or wounded."

Doctor Patterson showed and explained his passports. He also exhibited several copies of French newspapers. These are greatly condensed on account of the scarcity of paper. Most of the Paris papers now consist of a single sheet each, about 18 by 24 inches. Spaces are left in the papers where articles have been deleted by the censors.

It costs \$128 per year to board a hired hand, according to estimates furnished to the department of agriculture by 1,000 farmers representing widely separated sections in 14 states.

TO KEEP SPUDS HEALTHY

SEED SHOULD BE SELECTED AND CAREFULLY TREATED

Heavy Losses Have Been Suffered Through Diseases Affecting Potatoes—Some Live from Year to Year in Soil—Plant Specialist Makes Suggestions

Potato growers in Kansas should guard against losses through plant disease. Home grown seed should not be planted unless the seed is carefully selected and treated, according to L. E. Melchers, instructor in plant pathology in the Kansas State Agricultural college.

"The potato crop the last season in this state was not up to standard and most fields showed that the potato tubers were badly infected with disease," said Mr. Melchers. "Two diseases that were particularly prevalent last season are spread by means of the potato tubers or seed. These were the dry rot or wilt disease and the blackleg.

GOOD SEED FROM NORTH

"Home grown seed should not be planted this spring unless the seed is carefully selected and treated, otherwise the crop will be worse than in the season of 1916. Even though seed is secured from northern states, the grower should insist that it is guaranteed free from disease and has passed inspection. In most cases it will be best for the potato grower to get new seed from another source than this state. Such states as Minnesota and Wisconsin are adopting vigorous measures to place on the market seed which not only will yield well but will be free from troublesome diseases, such as scab, dry rot, rhizoctonia, and blackleg—diseases which are carried on or inside the tubers.

"Potato scab causes a rough or cracked appearance of the skin of the potato. This disease may live over in the soil from year to year or in the manure from animals fed on diseased tubers, or it may be found in the soil dust attached to the tubers themselves. Apparently this trouble is more prevalent in alkaline soils and growers should on this account avoid using materials which will add excessively to the alkalinity of the soil. Since the potato scab organism occurs on the beet and turnip, some other crop than these should enter into the rotation."

FORMALDEHYDE IS EFFECTIVE

The formaldehyde or corrosive sublimate treatments are the most reliable in combating the potato scab, believes Mr. Melchers. In the formaldehyde treatment, the soaking method is the most effective and there is less danger of injuring the seed than where formaldehyde gas is employed. One pint—approximately one pound—of commercial formaldehyde is mixed with 30 gallons of water and thoroughly stirred. The uncut tubers are placed in gunny sacks and soaked in this mixture for about two hours, after which the seed is removed and dried. Tanks, barrels, or large vats are best for carrying out this treatment. The solution can be used as long as it lasts. If treated seed is to be stored before planting, care should be taken that it is placed only in clean sacks, bins, or boxes, as otherwise the seed may again become contaminated.

Corrosive sublimate is also used, but great care should be taken since it is a deadly poison when taken internally, although it does not affect the body by contact. The uncut seed is placed in sacks and soaked in a solution made by mixing four ounces of corrosive sublimate in 30 gallons of water.

HOW CHEMICAL IS HANDLED

The corrosive sublimate is first dissolved completely in a small quantity of hot water. After this it should be placed in the required amount of water. Only earthen jars, barrels or wooden tubs, never metal containers are used. The seed should soak for one and one-half hours. Treated tubers must not be fed to stock, since the solution is poisonous. Corrosive sublimate solution loses its strength rapidly, and consequently must be

made fresh after having been used three or four times.

Avoid planting scabby seed on land which is thought to be free from this disease, advises Mr. Melchers. When fields are known to have the scab organism, rotation should be practiced. Potatoes should not be planted on the same land more than once in three or four years, if the best results are to be obtained. This applies to potato tuber diseases in general.

WILT IS SERIOUS DISEASE

Dry rot or wilt is perhaps the most common and serious of the potato diseases in Kansas. In the field the diseased plants wilt and die before they are fully grown. When tubers are formed on diseased plants, the seed becomes infected, and if these are planted the following season, another diseased crop results. The wilt disease is easily recognized if it occurs inside the tuber. In cutting a diseased tuber at the stem end, one finds a blackened, discolored ring just below the rind. Infected tubers in storage produce a dry rot, and the stem end frequently becomes shriveled.

Throw away all seed that shows black discolorations when cut, warns Mr. Melchers. Use only clean uninfected seed from a reliable source. Treat the seed as for scab before planting, except that one and one-half hours in the solution is better. Practice a four or five year rotation. Planting healthy seed in soil that contains this fungus means loss from wilt disease. The disease can live over for a number of years, and therefore rotation is necessary.

SYMPTOMS OF BLACKLEG DISEASE

Blackleg is a bacterial disease of potatoes which is becoming worse in the state each year. Affected plants are smaller than normal ones, and the leaves are pale and tend to curl upward. The disease causes the seed tuber to rot early, thereby producing a weak plant. The rot spreads from the diseased seed to the potato stems which in turn blacken and rot. Diseased plants generally die without ever forming tubers. This disease is responsible for a good many missing hills in the potato field. The disease is apparently worse in heavy, moist soils. When a tuber is infected with the blackleg disease, it rots at the stem end and penetrates the tuber sometimes as far as the center, while the outside of the potato may look normal.

Blackleg has been found to be carried on the seed. In this manner it is transferred to the soil. It is controlled by selecting only sound seed and all seed should be disinfected with the formaldehyde treatment as for scab of potatoes. In addition to seed treatment, all diseased plants should be pulled up, so that diseased tubers are not formed, otherwise they might spread the disease another season.

TOO MANY DECISIONS ARE MADE FOR YOUNG PEOPLE

Former President of College Tells of Need for Initiative—Dr. E. R. Nichols and S. M. Wood Address Students

Too much is done for young people, too many decisions are made for them, according to Dr. E. R. Nichols, of Chicago, former president of the Kansas State Agricultural college, in an address before the student assembly.

"I find too many men," said Doctor Nichols, "who excel in scholarship but who do not have initiative. They lack the qualities of leadership. I do not mean to say that scholarship is not important, but the ability to mix with one's fellows is better than an extra five per cent in grades."

"This institution had its greatest growth, both in students and buildings, during Doctor Nichols' administration," said Dr. Henry J. Waters, president of the college, in introducing the speaker.

S. M. Wood of Elmdale, a member of the board of regents during the latter part of President Anderson's and the first of President Fairchild's administrations, spoke briefly but interestingly to the students following Doctor Nichols' address.

KITCHEN IS WORKSHOP

IS NO PLACE FOR GENERAL CHORES, SAYS SPECIALIST

Housewives Save Work When They Adopt Modern Efficiency Methods—Business System Should Be Employed in Every Activity

The average country kitchen is no longer a place to do general chores, but is the workshop of the housewife, according to Miss Mary M. Baird, instructor in home economics, department of home study, division of extension in the Kansas State Agricultural college.

"Kitchens are built smaller now than formerly," said Miss Baird. "The farmer, as a rule, has an office. There the men wait for meals instead of in the kitchen. Laundering also is done in a separate room.

DO NOT RETRACE STEPS

"Housewives are saving work when they adopt the efficiency methods used in business. It has been learned in factories that time and effort are saved by routing the product in an orderly and systematic manner. To do work efficiently, the housewife must use system. Steps should not be retraced. In the preparation of the meal the woman walks from left to right, and in dish washing from right to left.

"Kitchen work consists of the preparation and clearing away of meals. In preparing a meal, the raw food and utensils should be placed to the left of the stove. The serving table used for assembling the dishes for the dining room, should be to the right of the stove. The soiled dishes are brought from the dining room to the right side of the sink, where they are washed. They are drained on the left side of the sink. The cupboard for the china should be near the dining room, preferably between the two rooms, and the cooking utensils should be placed close to the stove.

OBLONG KITCHEN MOST CONVENIENT

"In the ideal kitchen, the cupboards are built in the walls. Kitchen equipment may be placed to best advantage in an oblong kitchen with windows on two sides. The woodwork should be plain and flat without panels. Color should be guided by the position of the room. A north room should have a warmer tint than a south room.

"Linoleum is the best floor covering, and should be varnished once a year, and oftener if there is much wear. Electricity is the ideal fuel, but if this is not available, and wood or coal must be used, provision should be made to burn kerosene or gasoline in the summer. The use of a fireless cooker saves fuel. It is especially desirable in hot weather."

MAKING HONEY IS SIDE LINE WITH BUSY BEES

Fruit and Alfalfa and Clover Seed Would Be Scanty if it Were Not for These Insects

The making of honey is a side issue in the important work of bees, according to Dr. J. H. Merrill, assistant professor of entomology in the Kansas State Agricultural college. Without bees there would be little fruit and little alfalfa or clover seed.

"The strawberry is a plant for which insects are necessary to produce good fruit," said Doctor Merrill. "In some varieties the staminate and pistillate flowers are borne on different plants. Experiments have been undertaken to determine whether the wind could carry pollen. Gelatin plates were exposed which would contain pollen grains if carried by the wind. In not a single case were pollen grains of the strawberry found. The regular pollinators of the strawberry are honey bees and other small bees.

"Bees are important in pollinating the cucumber. It is a common practice to have bees in the cucumber house. Very few cucumbers would set without them. Tomatoes are sometimes self-pollinated, but bees are an important factor in producing good fruit. The size of the fruit is slightly increased and the crossed

fruits have a greater tendency to be irregular than those not crossed.

"Various species of plums are also pollinated by insects, and the bee is important in this work. Fruit will not set when insects are excluded. It has long been recognized that bees are valuable in the pollination of the apple and the pear.

"Bees are essential for the production of a fruit-and-seed crop of many agricultural plants. Every horticulturist should keep a few colonies of bees to insure a crop of fruit."

MANY OF COLLEGE CADETS COULD ACT AS OFFICERS

In Event of War, Trained Men Would Be Available for Volunteer Regiments, Says Claeren

If the United States should enter war, hundreds of students in the Kansas State Agricultural college would be capable of officering volunteer regiments, according to E. L. Claeren, retired commissary sergeant in the United States army and assistant to the commandant at the Kansas State Agricultural college.

The college military department has an enrolment of 860 cadets under the supervision of a captain of the regular army, L. O. Matthews, detailed by the war department as commandant of cadets. Discipline is administered by cadet officers under the general direction of the commandant and the assistant commandant.

The regiment is composed of three battalions of four companies each, an engineering company, a machine gun company, and a thirty piece band. These cadets are drilled three hours a week. The course in military training covers a period of two years and is required of men students.

The college maintains a standard target range, one of the few standard ranges west of the Mississippi river. Two rapid fire guns, issued to the department by the government, are handled by a special company of students from the engineering division. The engineering company is handled by students from the senior class of the engineering division. The training that the cadets receive gives them the rudiments of military field engineering.

"Kansas is one of the leading states in military preparedness," commented Sergeant Claeren. "This department ranks fifth in military efficiency among all the land grant colleges in the United States. The names of all commissioned officers of the college cadet corps who are graduated are filed by the war department in Washington. These men will get the first offers for commissions in case of a call for volunteer regiments."

NEARLY 1,000 STUDENTS AT AVERAGE EXTENSION SCHOOL

Interest in Work of this Character Grows Rapidly in Kansas

Attendance at 25 one-week schools in agriculture and home economics held in as many communities by the division of extension of the Kansas State Agricultural college was more than 20,000. Interest in these schools is growing rapidly.

Five instructors—two men and three women—were sent to each school. In 12 of the communities the schools were held for a second time, drawing a total attendance of 10,641. The communities petitioned for the schools, organized the classes, and paid the local expenses. The agricultural college paid the salaries of the teachers and their railroad fare from funds appropriated by the state and the federal government for this purpose.

"The extension school idea is growing rapidly in Kansas," commented Edward C. Johnson, dean of the division of extension. "Already many petitions have been received for schools to be held next year. They will be available for any community provided the time of the instructors will permit. The only requirement is that a class of not fewer than 50 men and 25 women be organized by the community and a fund sufficient to pay expenses guaranteed. This will be between \$50 and \$125."

THESE WON'T BE STUNG

SPECIALISTS IN BEEKEEPING HAVE NOW MANY OPPORTUNITIES

Demand for Trained Men Exceeds Supply—In Last 12 Years 15 Agricultural Colleges, Including Kansas, Have Established Courses in Subject

Beekeeping is no longer a side issue and hobby. It is now recognized as a science and is being given an ever increasing amount of attention. New fields of activity have been opened up so rapidly that there are not enough trained men to fill the positions which have become available, according to Dr. J. H. Merrill, apiculturist in the Kansas State Agricultural college.

"While nearly everyone who keeps bees is sure to gather a surplus of honey during the years of good honey flow," commented Doctor Merrill, "it is only the specialist who can secure a good yield year after year during both lean and plentiful harvests. There probably always will be farmer-beekeepers but the country will have to depend upon the scientific beekeeper for the bulk of its honey crop. With his more complete knowledge of bee behavior and of the proper conditions necessary to produce a surplus crop, he is better fitted to produce a crop year in and year out.

UNDERSTANDS ALL PHASES

"The scientific beekeeper knows how to choose an advantageous site for his apiary and how to manipulate his bees to have strong colonies when the honey flow commences. He also knows what plants will produce the main honey crop in his territory and how to take fullest advantage of their flow of nectar. Not only does he understand how to produce paying crops of honey but he also knows how to prepare it for market and how to dispose of it successfully.

"Men who can fulfil these qualifications are in constant demand to assist in or manage apiaries. The demand for such men, however, far exceeds the supply.

STATES HAVE INSPECTION LAWS

"The various diseases which have so seriously threatened the beekeeping industry have led to the enactment of inspection laws in most states. These laws provide for the appointment of inspectors who shall be competent to examine colonies, detect whatever disease may be present, and direct the treatment. It is evident that such men should be well trained."

Twelve years ago, Doctor Merrill points out, none of the agricultural colleges were giving any attention to apiculture. There were some which treated the subject briefly in their regular courses in entomology. Fifteen agricultural colleges now offer full courses in beekeeping, and many others will follow along the same lines if they can secure competent men to conduct such courses.

FEDERAL EXTENSION WORK

While the government formerly did but little for the beekeeper, congress is now appropriating \$5,000 for extension work in apiculture. It has placed specialists in three states to teach, help, and encourage those interested in beekeeping. The federal government and many of the states are issuing valuable bulletins and other publications on the subject.

The department of entomology in the Kansas State Agricultural college has established a course in beekeeping in which an effort is made to give the training that will fit men to fill some of the many positions which are now available. Several requests have been received by this department for men trained in apiculture who are qualified to assist or manage apiaries. Not only have requests been received for men to work in this state but educational institutions in other states have also applied for men trained in this new field.

More than 6,000,000 trees were planted in the national forests in 1916.

The horses that have been shipped to Europe are permanently lost to this country. There is need for breeders to get busy.—Farm Journal.

THE KANSAS INDUSTRIALIST

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Number 22

TWO FIELDS FOR WRITER

COUNTRY AND AGRICULTURAL JOURNALISM OFFER OPPORTUNITIES

Charles Dillon Gives Students Many Important Suggestions for Handling Matter for Publication—Magazines Show Tendency to Deterioration

The big fields of journalism in the future are to be found in the development of farm journals and country newspapers, according to Charles Dillon, founder and former head of the department of industrial journalism in the Kansas State Agricultural college, who gave a series of talks before students of industrial journalism. Mr. Dillon is now managing editor of the Capper Farm publications, the largest group of farm papers under one management in the country.

"Class farm papers are not usually a financial success, except in the dairy field," said Mr. Dillon. "A success-



CHARLES DILLON

ful farm paper must embrace every activity of agriculture from the farmer in the field to the mother in the home.

WATCH MINUTE DETAILS

"Minute details of sentence structure and arrangement of subject matter, which would probably never be noticed by the average reader, are carefully watched in the makeup of every paper going out from a well managed office. Readers like new ideas—a fact which too many editors do not realize. We try to vary our editorial and other subject matter, both in arrangement and amount. Readers are quick to notice and appreciate these changes."

Mr. Dillon told of his experience in obtaining material for his papers. He has found that continued stories, and puzzles for children are necessary, even in a farm paper. Furthermore, the stories must be good. A great deal of time is spent in selecting suitable fiction. Photographs are a great help in making a farm story a success. Nearly all farm stories, Mr. Dillon pointed out, are written by men and women who are actual farmers.

HUMAN INTEREST IMPORTANT

"A journalist is judged by what he writes and by the makeup of the paper on which he labors," said Mr. Dillon. "One cannot be too careful in the use of English. The human interest factor makes a paper interesting."

"The lead should be varied often and simple plain language used. Don't strike too high or too low. A person should learn to write naturally. The mere mechanics of writing are easily learned. A common fault of inexperienced writers is the constant use of negative and interrogative sentences for leads. Vary your stories. A successful farm story may well contain humor, but it cannot reflect on the farmer or his work."

THE COUNTRY PAPER'S CHANCE

In speaking of country newspapers, Mr. Dillon stated that their weakness lay in the failure to develop the news of the community. There is also too much abbreviation.

Mr. Dillon pointed out that from 50 to 90 per cent of the trade of the small towns of Kansas is from the farmers. The stories in the papers should be written to interest these people. The stories should not stop with the mere mention of facts, but should give all the available information in simple, clear language. If these stories are written as the writer thinks they should be instead of according to what he thinks the public or the editor wants, they are likely to achieve better results. They should contain facts of human interest and should be a concrete expression of the spirit of the people for whom they are written.

CATERING TO MORBID MIND

"In my opinion American magazines have deteriorated in the last few years," said Mr. Dillon in discussing current periodicals. "I have no sympathy with the trained writers of national reputation, who, for monetary compensation, write stories catering to the morbid mind."

Mr. Dillon expressed the belief that too many magazines tear down, instead of having a constructive policy. Discontent, however, within bounds is healthy, for there can be no progress without discontent. A periodical should have a personality—it should be as a friend coming in the door, said the speaker.

Mr. Dillon spent the day in the department offices and workrooms, conferring with students on problems of journalism. He was the guest of honor in the evening at a dinner given by Prof. N. A. Crawford to a group of members of the faculty and the advanced students in the industrial journalism course.

CONCRETE PAVEMENT LASTS ON HEAVILY USED ROADWAY

Affords as Good Foothold for Horses, Too, as Any Hard Surface

The concrete pavement in use on the main driveway at the Kansas State Agricultural college has proved that this type of pavement is successful, according to L. E. Conrad, professor of civil engineering. This pavement has been in use for more than three years and shows practically no wear.

The traffic over this road is heavy. It consists of all the coal and machinery delivered to the college, a large part of the material that is used in the construction of new buildings on the campus, college mail and express, and the many pleasure vehicles that are continually using this road.

Two methods were used to surface the road. On the level portion of the roadway the finish was made comparatively smooth, while on the grades a heavy stable brush was drawn over the green cement, leaving a rough surface. It is probable that after a few years of service the roadway which has the smooth surface will present a more uniform appearance but at present there is no appreciable difference.

"The teamsters hauling coal to the college power plant were strongly of the opinion that the road would be slippery," remarked Mr. Conrad, "but they say, after using it for three years, that it affords as good a foothold for the horses as any hard surface."

"The expansion and contraction of the concrete is taken up by steel bound joints that are placed every 35 feet, these joints being surrounded by an elastic material. Outside of a few dollars for replacing some of this material, there has been no expense whatever for the repair or upkeep of the roadway."

TO PRODUCE MORE FOOD

HOME GARDENS WILL OVERCOME PRESENT SERIOUS SHORTAGE

Board Approves Appointment of Local Leaders to Help in Boys' and Girls' Club Work Maintained by Agricultural College

Gardens will be a factor in overcoming the present food shortage in Kansas. Recognizing the economic value of producing vegetables in home yards and vacant lots, the board of administration has approved the appointment of local leaders as temporary assistants in the boys' and girls' club work of the Kansas State Agricultural college.

These leaders will work under the direction of the division of extension and in cooperation with county superintendents, school teachers, and farm bureaus. They not only will promote garden clubs among boys and girls, but will interest women who would find real pleasure in growing vegetables for table use, and some of the old people, likewise, who cannot stand the heavier work of the farm but who wish to be active.

CAN PRODUCTS IN HOMES

The assistants will urge the canning of surplus products for home use. Mother-daughter canning clubs are now being organized in counties where there are farm bureaus and county agents and in districts where agricultural agents are employed by the agricultural college. Many of the farmers' institutes in the state are urging the production of more garden truck and poultry products for home use.

F. W. Kirk of Oklahoma City recently was appointed by the board to work among the colored people. He is now busy organizing gardening and canning clubs in the small villages and in the country districts where there is a considerable negro population.

THESE ARE LOCAL LEADERS

Following are the names of the local leaders appointed and the districts they represent:

Thomas J. Cahill, Leavenworth, Leavenworth county; Mrs. J. M. Timmons, Bonner Springs, Kaw Valley along the interurban line between Lawrence and Kansas City; Miss Elsie Baird, Fredonia, Labette, Wilson, and Woodson counties; Miss Bertha McCabe, Lyons, Rice county; Charles Boyle, Emporia, Lyon and a part of Osage and Coffey counties; Miss Florence Sculley, Colony, Anderson county; Miss Edna Metz, Jewell City, Jewell county; Miss Catharine Wells, south half of Republic and north border of Clay counties; Miss Margaret Carr, Leavenworth, Jefferson and a part of Atchison counties; Miss Ava Sells, Maple Hill, Wabaunsee county; the Rev. H. P. Alexander, Kipp, a part of Saline county.

GARDENER SAYS IT WILL PAY

It will pay—and pay well—to have a home garden this year.

A half acre of garden crops carefully tended will easily yield a family \$75 to \$100 worth of vegetables during the season, according to M. F. Ahearn, associate professor of horticulture in the Kansas State Agricultural college.

"Besides being an advantage from a financial point of view, the kitchen garden gives a supply of vegetables in a convenient place where they may be procured on short notice," said Professor Ahearn. "The vegetables brought directly to the table from the garden are fresh, while those brought from the market have been exposed for several hours or even days and have lost their freshness and perhaps their characteristic odor or taste."

SHOULD BE NEAR HOUSE

"The garden should be located in close proximity to the house on fertile,

well drained sandy loam soil. A good chicken tight fence is indispensable if chickens are kept."

The question of arranging the crops in the garden is largely a matter of judgment, suggests Professor Ahearn. The long season crops, however, should be put together on one side of the garden and the short season crops grouped together. Where the garden is to be worked with horse machinery, plans should be made to give the longest rows and allow for turning at the ends. If the labor is to be done largely by hand the rows may be set closer together.

If the garden has not been plowed in the fall it should be plowed and harrowed. If the soil is too sandy and allows the moisture to evaporate too readily, well rotted barnyard manure should be added to aid in holding the moisture and at the same time to supply plant food. Well rotted barnyard manure is the best fertilizer for the garden but commercial fertilizer may be used to advantage. After being plowed, the ground should be smoothed and pulverized. This may be done by harrowing and dragging.

Seeds for the garden should be ordered well in advance of the time for planting. The seed should, of course, be free from weed seed and have a high percentage of germination. Care should be taken, in selecting the seed, to obtain the varieties which are adapted for growth in a particular locality.

START SWEET POTATO SLIPS LATE IN MARCH

Two Bushels Will Produce Sufficient to Plant Acre—What Varieties for Kansas

The last of March is the time to start sweet potato slips for the 1917 crop, points out F. S. Merrill, assistant professor of horticulture in the agricultural college.

"Two bushels of small sweet potatoes will produce enough slips to plant one acre of ground, which should produce 100 to 300 bushels of sweet potatoes," said Professor Merrill.

"The plants should be started in a hotbed in the latter part of March. This will insure slips ready for transplanting in corn planting time. A hotbed four feet by 10 feet will be sufficient for two bushels of potatoes. It should be located where it has a wind-break."

"Manure used for heating purposes should come from the horse barn. It should be piled four to six feet high and allowed to stand for 10 or 12 days. Turn the manure several times to insure heating evenly throughout the pile. If the fermentation is slow in starting, add a little hot water or a small amount of hen manure to one corner of the heap. Manure thus prepared, should be moistened and packed to a depth of 18 to 20 inches in a pit 30 inches deep. Cover this with two inches of sandy loam."

"After the bed has cooled to a temperature of 90 degrees place the potatoes on their sides so that they do not touch. If large potatoes are used they should be split and the split side placed downward. Cover them with two inches of sand. This prevents baking and allows the slips to be removed easily at transplanting time."

"The slips should be set out 18 to 20 inches apart in rows three feet apart either on ridges or on smooth ground. Sweet potatoes, which contain more food value than Irish potatoes, do not require as rich soil but are well suited to a sandy soil."

"The most popular and reliable varieties used by Kansas growers are the yellow Jersey, the Nancy Hill, the yellow and the red Nansemond, and the pride of Kansas."

COULD LEAD IN DAIRYING

KANSAS COULD BE GREATEST PRODUCER OF BUTTER FAT

More Alfalfa and Corn Should Be Raised, Says Agricultural Economist—Marketing Cost Will Drop When Industry Is Better Developed

That Kansas could be made the greatest cream and butter fat producing state in the union provided the farmers would take advantage of the opportunity to raise more alfalfa, and also big crops of corn for silage, is the opinion of Theodore Macklin, in charge of agricultural economics in the Kansas Agricultural Experiment station.

The dairy industry in Kansas is only in its infancy, believes Mr. Macklin. When it becomes better established the cost of marketing will be reduced materially.

WHY KANSAS PRICE IS LOW

"For many years there has been a feeling that the prices paid for butter fat in Kansas were low as compared with those paid for this commodity in Wisconsin," said Mr. Macklin.

"Comprehensive investigations of the methods of marketing butter fat were conducted in Kansas and Wisconsin in 1914, 1915, and a part of 1916, and the results are now available for comparison. It is shown in a Wisconsin Experiment station bulletin that farmers of that state receive an average of 23.33 cents for butter fat in one pound of butter, while Kansas farmers receive but 21.06 cents. This difference of 2.27 cents is explained by the difference in cost of getting butter fat from farm to creamery."

WISCONSIN HAS MORE COWS

Because there are less than one-fourth as many cows in Kansas per square mile as in Wisconsin there are less than 200 pounds of butter fat per square mile to be delivered to a creamery instead of more than 800 pounds as in Wisconsin, pointed out Mr. Macklin. Since a farmer drives on the average only about five miles to deliver cream there must be sufficient butter fat in a radius of five miles to warrant the economical making of butter in a creamery.

In Kansas there is not on the average enough butter fat within a similar radius to enable a small creamery to exist. Butter fat, consequently, must be assembled from wide areas in order to secure a sufficient amount at some central point for the economical manufacture of creamery butter.

AND SO TRANSPORTATION IS HIGH

The average cost in Kansas of getting 15,000,000 pounds of butter to the creamery is 3.46 cents a pound. This cost consists of station commissions, direct shipment solicitation cost, creamery station rent, testing cost, cream can depreciation, and express and drayage from depot to creamery. In Wisconsin it costs but 1.5 cents to get the butter fat in a pound of butter from the farm to the creamery.

Upon comparing the cost of getting the butter fat to the creamery in Wisconsin and getting the butter fat to the creamery in Kansas it is found there is a difference of 1.96 cents, leaving only .31 cents to be considered. This is more than accounted for by the difference in average Elgin prices during the period of each of these studies.

If the Kansas farmer desires more profit from dairy farming he can obtain it, thinks Mr. Macklin, by reducing the cost of production, improving the quality, and demanding payment according to quality, but not expecting a first class price for second grade cream. The dairy herd should be increased from the present average of six to 20 head per farm, making dairying the main instead of the side line.

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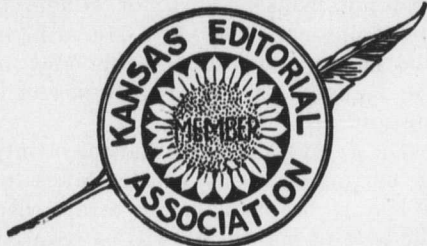
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WEDNESDAY, MARCH 14, 1917

NEEDED—COMMUNITY TEACHERS

The teaching of agriculture in the rural schools is a good thing. The rural schools are probably 100 per cent better for it. But the rural schools need something besides the teaching of agriculture in their classrooms.

It is chiefly women who are teaching in the rural schools. Most of them are teaching well—they are doing their work far better than any other class of persons receiving anywhere nearly as low salaries. Some of them are from the country, some from the cities. Whichever place they are from, however, agriculture is not their main interest, nor do they appreciate fully the economic and other problems arising in agriculture. About the same things might be said of the young men who are teaching in rural schools, but they are so few as to be practically negligible.

If the rural schools are to become here the vital force that they are in some countries and that they ought to become in the United States, they must be taught by persons who have a broad yet practical view of the manifold problems of agriculture and country life. They must be taught by persons who know scientific agriculture but who at the same time know farming as a business and who have a deep, genuine interest in it.

The ideal plan seems to be what is found in some of the smaller countries of Europe. The school teacher in the rural district is a man, well educated, knowing the farming business. The school pays him enough to live and support a family. It also furnishes him land which he operates as a farm.

The school teacher thus becomes a vital and permanent part of the rural community. The teacher there does not teach with a view to getting married or to studying law. The teacher feels that in teaching he has found his vocation. He tries to make his farm the best farm in the community. His example in improved agricultural methods influences not only his pupils, but all his neighbors. He gives his students a big, practical outlook upon agriculture and rural life. He is the active leader in everything that tends to the betterment of the community. He is not merely a school teacher; he is a community teacher.

This country needs more community teachers; it will get them when it furnishes the conditions that produce and encourage them.

THE LEADER IN BUSINESS

The leader in business must not only have worked like his men, but to rise above them he must have the cardinal business virtues: faith, hope and courage—and the greatest of these is courage. To believe in yourself; to believe in your idea when people slight the one and sneer at the other; to see the castles of your vision rising clear

and complete on the far horizon where other eyes see nothing but the clouds; to aim straight ahead over every obstacle that doubt and disbelief can raise—this has ever been the course of the man who wins. With high courage men have failed; without it no man can succeed.—George Horace Lorimer.

CAUSE FOR SOFT BUTTER

It is a common belief that soft butter in spring is due to the large amount of water on the new grass. Some feeders have even gone so far as to cut down on the amount of water allowed in this season, thinking it would improve the product. The fact of the matter is the water has no effect on the condition of the butter, but the change is due to the butter fat itself.

Butter fat is composed of two kinds of fats known as volatile and non-volatile. Each of these in turn is made up of a number of substances called fatty acids, but which for convenience we will speak of as oils.

The non-volatile oils are six, and their relative amounts in the butter fat largely cause the variation in hardness and softness of the butter. The most important of these oils is olein, since it has been found to be present in the greatest proportion during spring when the cows are on grass. Olein has a much lower melting point than the other oils, and consequently an increase in its amount causes the butter to melt at a much lower temperature. We can readily see the cause for soft butter in the spring is not the water in the grass. In fall or winter when normal feeds are given the percentage of olein is less, the melting point is higher, and we have a firmer, harder product from the churn.

Cutting down on the cow's water supply because the grass is soft does not make the butter harder; it only cuts down on the amount of milk your herd can produce.—Successful Farming.

THE WORTH OF EDUCATION

Education for farmers has some beneficial results that are measurable in money value. Some experts of the United States department of agriculture have found that the labor income of farmers who have been trained in college is \$495 per year greater than farmers who have received only a high school education. This is equivalent to five per cent interest on \$9,900. Figuring that the average cost of a college education is \$2,000 (\$500 for four years), and presumably that is a fair average for men who expect to become farmers, the investment is yielding, in increased earning power, nearly 25 per cent.

Upon this estimate Walter Stemmons, editor of the publications of Oklahoma Agricultural and Mechanical college, estimates that in 40 years a college education would increase the normal earning power of the farmer by \$19,800 or, in other words, each year of the eight years spent in high school and college is worth \$2,475 to the farmer.

From various statistics, it is learned that the average educated man earns \$1,200. In 40 years he would earn \$48,000. The average laborer earns \$1.50 a day, 300 days in a year, or \$450 a year. His earnings in 40 years would amount to \$18,000. Upon this estimate the money value of an education is \$30,000.

Education for the farmer pays. It pays for any one. But its money value after all is the least of its benefits. The satisfaction of knowing, of leadership, of self-control, of wider appreciation of life—these are the things that make an education worth while.—Southland Farmer.

CO-OPERATIVE FARMING

Wherever it has been tried coöperative farming, which includes, among other things, coöperative purchasing and marketing, has proved successful. Up in northwest Canada three companies organized and engaged exclusively in marketing wheat have made a profit of \$1,815,000 during the last season. These three companies handled 90,000,000 bushels of wheat, or about

one-half of the marketable crop of that vast section. There are 48,000 stockholders, composed of farmers, large and small, and each share of stock has earned \$37.80 during the season. The farmers of northwest Canada are public spirited, and they resent in a practical way and overcome oppression and wrong treatment from every source.

Some years ago the railroads became exorbitant in their demands, and instead of throwing their wheat upon the market all at one time, as some of our southern cotton states do with their product, a series of great warehouses were erected and the wheat stored in these to await eligible seasons for shipment.

Reports have been current, and apparently well founded, that potatoes have been imported from England and sold at a profit in the local markets of the United States during the past months. If this is true, it shows nothing except that our people are not taking advantage of their opportunities. It does not reflect upon the quality of our soil, but merely shows that too many have turned to other pursuits, to the neglect of the country's food supply, and the lesson which it teaches should be heeded—not in a headlong stampede, but in thoughtful consideration of the facts. Will the prices next fall return a profit to all who plant gardens?—The Fruit-Grower.

Love of the Home

Henry W. Grady

The man who kindles the fire on the hearthstone of an honest and righteous home burns the best income to liberty. He does not love mankind less who loves his neighbor most. The germ of the best patriotism is in the love a man has for the home he inhabits, for the soil he toils, for the trees that give him shade, and the hills that stand in his pathway.

The love of home, deep-rooted and abiding; that blurs the eyes of the dying soldier with the vision of the old homestead amid green fields and clustering trees; that follows the busy man through the clamoring world, persistent to put cares aside, and at last draws his tired feet from the highway and leads him through the shady lanes and well-remembered paths, until, amid the scenes of his boyhood, he gathers up the broken threads of his life and owns the soil his conqueror—this—this lodged in the heart of the citizen is saving principle of our government.

Unfortunately for the farmers, the railroads finally came in control of these warehouses by purchasing a majority of the stock, and the wheat farmers were again in a dilemma. Wheat would not be accepted unless it was first stored in a warehouse on the plea of economy. The railroads argued that loading wheat from wagons was too expensive, and they demanded that it be deposited in the warehouse, where in turn these warehouses charged exorbitant storage in handling rates.

The coöperative marketing companies told the railroads and their warehouses to go hang and began building warehouses of their own, but had not to go very far when a satisfactory compromise was reached. Since then farmers are in a manner competent to deal with the transportation companies and as a result they have improved their condition wonderfully, while dealing justly and equitably with the railroads.

There are few things which a determined and an intelligent people cannot do when they honestly and seriously set their heads and hands to it.—Memphis News Scimitar.

WHAT ABOUT PRICES?

It appears to be the general impression among local retail grocers in various parts of the country that the coming gardening season will see a veritable stampede toward the open land. One man expressed the opinion that many people would plant gardens this year who had never done so before, and that those who usually grew only a part of what they needed would make an effort to increase their planting and production to the utmost limit. It is predicted that potatoes will sell at 50 cents a bushel in the fall and winter of 1917.

Whether this be true or not, nobody can tell, but it is a fact that the prevailing high prices of all garden products have stimulated more interest than for many years in gardening. Even now, it is said people are buying seeds in generous quantities, and some are planning to plant their front lawns. Probably this is an exaggeration, but it shows that people are awakening to the neglected opportunities in the family garden.

A QUARTER CENTURY AGO

Items from The Industrialist of March 12, 1892

The payroll for students and men for February amounted to \$588.06.

The rainfall of Saturday and Sunday amounted to almost two inches.

Thursday, April 7, has been designated by the governor as Arbor day. Plant a tree then.

The class in mineralogy spent the afternoon of yesterday in collecting under the direction of Assistant Breese.

C. A. Campbell, '91, has returned from Golden, Col., where he has been teaching. He expects to spend several months at home in Manhattan.

Professor Walters has been confined to his room for three days by a gathering in his face. R. C. Hunter, fourth year, had charge of the drawing classes.

W. Marlatt of College Hill is a victim of the daily newspaper portrait, what purports to be his likeness having appeared in last Sunday's Kansas City Times.

W. T. Swingle, '90, is the author of farmers' bulletin 5, issued by the United States department of agriculture and entitled "Treatment of Smuts of Oats and Wheat."

The balloon ascension and parachute drop at city park on Tuesday afternoon had its attraction for students, as well as other people. A large crowd was in attendance.

Last week's Kansas Farmer gives room to four articles regarding the work of the college men—Professor Failyer's sorghum analysis, Professor Georgeson's feeding experiment, Professor Kellerman's treatment of smuts, and Mr. Shelton's experience with strawberries.

On a recent visit to Burlington, Coffey county, we were pleased to meet an old college friend in the person of C. O. Smith, editor and proprietor of the Republican, the leading paper in that place. In 1875-'76 Mr. Smith was an apprentice in THE INDUSTRIALIST office at the agricultural college, taking meanwhile the regular course of study in that institution. Having known him thoroughly at that time, we were not surprised to find his doing work worthy of himself in the great world's school.—Manhattan Republic.

THE PLAINSMAN

Cale Young Rice in the Bellman

I'm out again in the great spaces,
Far from men and the little places,
I'm out again where the heart faces
The lone plains and the skies.
I'm out with the wind no hand can saddle;
Out and away from wants that addle;
Out where the striding sun can straddle
The world.

And oh I'm full of scornful pities
Fordweller in streets and narrow cities;
For the trade-songs, and trade-ditties
They chant.
And I wish I could smile out of creation
The lie they call their civilization—
A lie that is but soul-dissipation,
Soul-deceit and cant.

I'm out again in the great spaces,
Far from men and the little places,
I'm out again where the heart faces
The lone night and the stars.
And I wish I knew how to untether
All pent lives to the wide, world-
weather,
And say, "Come, come, let us ride to-
gether
Away."

For one hour's sense of the infinite
prairie
Is better than all the years men bury
In crowded walls, sad, mad, or merry
Or vain.
And one star's light has more of
Heaven,
Has more in it of the great God-leaven,
Than the seventy myriad lights and
seven,
Cities beget, for gain.

SUNFLOWERS

There are still a good many people who pin their faith on useless information.

Not counting human beings there are only eleven or twelve jokes in the world.

It looked for a while as if the weather man were taking the bone dry law too seriously.

It's getting so nowadays that it is much more pleasant to be let alone than it is to be entertained.

JUST A TRIFLE

"Pa, it says here in the paper that ten pedestrians were run down on the avenue yesterday. What does that mean?"

"Nothing much, my son."

A MODERN PLEASURE

She: "Why is it that men spend so little time thinking of their own wives?"

The Victim: "Because, my dear, it is such a pleasure not to."

NOTICE TO AUTO OWNERS

We will steal your car just as soon as we can get around to it. Please see that the gasoline tank is kept well filled and that everything is in good working order. It is embarrassing for our men to take cars and then have to abandon them out in the open country.

Auto Thieves' Association.

GRANNY UP TO THE MINUTE
(With the apologies, of course)

Granny's come to our house,
And say! but she's a winner;
All the girls that run with me
Are wild about that sinner.
Brought a dance for Sally Lantz,
Brought some tales for Annie,
Brought some slang for all the gang
That go the gaits with Granny.

A FARM WORKSHOP

Every farm should have some kind of workshop, even if it is only a very small one with a few tools at first, for every farmer finds almost numberless uses for such carpenter tools as hammers, saws, planes, a level, square, chisels, bits and bitbrace. And many uses will be found for a forge, anvil, post drill, etc.

If the cost must be considered, tools may be purchased a few at a time and in the course of a few months a workshop fully equipped will be the result. My experience has shown me that it pays to buy only the best.—Hugh E. Thorp in the Progressive Farmer.

AMONG THE ALUMNI

William Banning, '04, a stock farmer of Lyndon, was at the college on Saturday.

L. N. Arnold, '14, is managing a purebred dairy herd for E. S. Greening and Company, Hope, Ark.

Miss Maye Gonterman, '13, is successfully teaching domestic science and art in the schools of Gooding, Ida.

Miss Lois Witham, '16, is student assistant in the department of chemistry. Her work is largely with the freshman home economics girls.

Lester J. Bell, '15, has moved from Wellsville, Kan., to Helmsville, Mont., where he has special charge of pork production on the big Day and Hanson ranch.

W. E. Comfort, '14, is a lieutenant in the regular army. After April 1, Lieutenant Comfort expects to be at Eagle Pass, Tex. He is now at Fort Leavenworth.

Recent graduates of the college now employed by the Denver Gas and Electric company are A. M. Butcher, '16; J. G. Phinney, '16; L. C. Geisendorf, '15; and H. E. Butcher, '14.

John Bayles, '15, who has been assistant at the Garden City experiment station, has accepted a position as agricultural agent for the Frisco railway. His headquarters will be at Fort Scott.

J. R. Mason, '16, who since graduation has been with the Great Western Sugar company of Denver, Col., has received a substantial raise in his salary and has been placed in charge of important experiment work.

L. A. O'Brien, '14, sends a word of appreciation for THE INDUSTRIALIST and for the work of the Alumni association. He is in the employ of the Western Electric company as equipment engineer. His address is 3314 Baldwin avenue, Berwyn, Ill.

Harry C. Turner, '01, is in the government forest service and is stationed at Fort Bayer, N. M. He writes: "I am figuring on being in Manhattan for commencement. Inasmuch as I have only 15 days annual leave I want to spend it to the best advantage."

F. K. Lee, '15, is now located at Paia, Maui, Hawaii. In a recent letter he incloses his annual dues and writes: "I feel greatly honored to be qualified as a member of the Alumni association of such a great institution as the Kansas State Agricultural college."

C. H. Popenoe, '05, of the bureau of entomology in the United States department of agriculture, is author of farmers' bulletin 789, on "Mushroom Pests and How to Control Them." This bulletin also contains a list of the publications of the department relating to insects injurious to truck crops.

Miss Elsie L. Baird, '15, visited college recently. Miss Baird has been appointed district club leader for boys' and girls' clubs in Wilson, Woodson, and Labette counties with her headquarters at Fredonia. This work is done under the direction of Otis E. Hall, state club leader. For the past two years Miss Baird has had charge of domestic science and art in the Fredonia schools, her place for the rest of the present year being taken by Miss Grace Curry, '16.

BIRTHS

Born, to Mr. Raymond D. Fink, '13, and Mrs. Bernice (Truesdell) Fink, '13, of Kansas City, Mo., a daughter, Barbara Bernice.

Born, to Mr. E. C. Reed, '09, and Mrs. Pearl (Sanderson) Reed, '11, Independence, Kan., on February 24, a son, Rollin Esmond.

MARRIAGES

KUNKLE-YOUNG

Miss Josephine Kunkle and Mr. Stuart S. Young, '08, were married

February 4 at Coffeyville. They are now residing in that city, where Mr. Young is proprietor and manager of the Star Electric company.

HALL ADDRESSES STUDENTS

"I believe every young man should give a few years of his life in service to his nation," said William L. Hall, '98, district forester in charge of the Appalachian and White mountains, who spoke to the student assembly Friday morning.

"This period does not necessarily need to be spent in military services but in some work that will give the young man discipline and impress upon his mind the fact that he is a part of this great nation. Whether one is a farmer, a factory worker or a public servant he should remember that he is doing a service to his country. He should not look to the time when he can win wealth and fame but rather to the time when he can serve his fellow man."

"As a people we are coming to realize that each individual is a unit in the nation. Twenty years ago the government was not doing the work towards the conservation of the forest lands that it is doing today."

"Forests have been bought in mountain regions to preserve natural water sheds and to protect the land from erosion. Desert lands have been turned into forests by the federal reclamation service. It is as much our duty to preserve the country's resources for our posterity as it is to supply our own daily needs."

Mr. Hall was on his way to Salt Lake City, where he was to make an address. He is well known in the fields of forestry and horticulture.

CHICAGO REUNION

To Members of the K. S. A. C. Society:

The annual potlatch of the alumni, former students and members of the faculty of the Kansas State Agricultural college will be held at the Union League club, 69 West Jackson boulevard, Chicago, Friday evening, March 23, 1917, beginning promptly at 6 o'clock.

The date has been selected so that President Henry J. Waters may come from Manhattan to tell us of "The K. S. A. C. of Today."

We will also be especially fortunate in having with us Mrs. Nellie Kedzie Jones, who in her own inimitable way will speak about "The K. S. A. C. of Thirty Years Ago."

Toastmaster D. G. Robertson (vintage of '86) will give various and sundry members a few minutes each in which to prevaricate about anyone or thing present or absent ranging from Doctor Mayo's skeleton and the Spade of '95 to the 1917 Missouri Valley Basketball Championship.

The music will be supplied by Ione Dewey Sutherland, '93, and all the youngsters will join in the chorus. The frolic will last until the lights go out.

The eats will be good—cost \$1.50 per plate on account of the war. Bring all your folks and get your reservation in early on the inclosed card. If by any chance you should be prevented from coming after making a reservation, please notify me promptly. I have to settle the account with the cook!

Notices have been mailed to all who are on the secretary's Chicago alumni list. If anyone fails to get his notice, however, he will please write me at once if he can be present. The invitation includes everybody formerly or now connected with the college in any way, whether living in Chicago or elsewhere.

Yours for a good time,
R. S. KELLOGG, '96,
Secretary.

Any insurance company that wishes to do so can furnish complete evidence that lightning rods protect against loss by lightning. But the modern lightning rod has still to bear the burden of the lightning rod swindles of 40 years ago and for that reason is not half so much in evidence on farm buildings as it should be.—Oklahoma Farmer.

TEST COWS FOR DISEASE

DAIRYMEN FIND THIS THE ONLY SURE MEANS OF DETECTION

Veterinarian Gives Suggestions for Eliminating Tuberculosis from Herds—Proper Ventilation and Sanitation in Barns Are Essential

The only reliable way to detect tuberculosis in dairy cows is by use of the tuberculin test, according to Dr. J. H. Burt, associate professor of veterinary medicine in the Kansas State Agricultural college.

"This test," said Doctor Burt, "can hardly be administered by the average person. It is well to call in the aid of a competent veterinarian, or some other person who has had actual experience in diagnosing the disease."

SYMPTOMS OF TUBERCULOSIS

"A cow which is affected with tuberculosis—especially in the more advanced stages of the disease—will be a poor feeder, may cough, and will have a tendency to lose flesh, but these are not always sure symptoms of tuberculosis. There may be other causes contributing to the same condition. If a cow does show these symptoms, however, it is advisable to have her examined."

"Tubercular cows should be shipped to the packing houses having government inspection. Here are special facilities for handling such animals. The carcass is very carefully examined by the government inspector, and if it is found to be unfit for food it is condemned and made into fertilizer."

KEEP DISEASE FROM SPREADING

"If the diseased cow is an especially valuable animal, and it is not deemed advisable to dispose of her immediately, she should be separated from the rest of the herd and cared for by a special attendant. All precautions should be taken to prevent the spread of the disease."

"It is well for the dairy man to test his herd for tuberculosis and eliminate all those animals that are diseased. All animals that are purchased should be tested before they are added to the herd. All barns and housing quarters should be properly ventilated and maintained in a sanitary condition throughout. Only in this way can the dairyman be reasonably sure of protecting his herd against infection."

KANSAS YOUNG WOMEN PLAN TO BE FARMERS

Two Girls Study at College with View to Practicing Modern Scientific Agriculture

Miss Blanche French of Hamilton and Miss Luella Schaumburg of La-Crosse are studying at the agricultural college with a view to becoming up-to-date Kansas farmers.

Miss French's parents died in her early childhood. She and a younger sister have since lived on a large farm with their grandparents. Last year the grandfather died, leaving the entire management of the farm to the two girls.

"As I am the older I knew it was up to me to manage the farm," explained Miss French.

Miss Schaumburg expects to specialize in agronomy and plans to teach after graduation.

"I am hoping that my father will give me a farm if I prove worthy of it," Miss Schaumburg said.

PLANT SWEET CLOVER AND OATS BY MARCH 20

This Will Insure Pasture That Will Be Ready Early and Useful Till Middle of November

Oats planted by March 20, with a relief pasture of sweet clover sown at the same time will insure an early and season-long pasture, according to Ralph Kenney, assistant professor of crops in the Kansas State Agricultural college.

The oats will be ready to pasture by May 1 to June 25 and the sweet clover will be up and ready to pasture by the latter part of June.

Many farmers desire a pasture that is early and will last through a long season as well, but that is impossible with only one crop. This plan of a dual crop will furnish the farmer with a pasture that will support 1,000 pounds of live weight to the acre throughout the season as late as November 15.

The oats should be planted from two to 2½ inches deep and drilled in. In preparing the seed bed for the early oats, straight corn stubble can be disked with the disk harrow set as deep as possible and the oats drilled in as soon as the first disking is finished. It is better to drill at right angles to the direction that the ground was disked.

Three bushels to an acre should be used. There is a common idea that the stock will not eat sweet clover, but this is only at first. If they are allowed to become really hungry, they will eat it, and once they become accustomed to the sweet clover, they eat it readily. Sweet clover is less liable to cause bloat than any other clover or alfalfa.

OLD FIELDS OF ALFALFA NOT INJURED BY WINTER DROUTH

Many Fall Sown Plants Have Been Killed, However, Announces Agronomist

Although many of the alfalfa fields seeded last fall have been killed, the cold dry winter has in no way injured the old fields.

Last summer was dry and the seedbed could not be properly prepared for the reception of the seed. For this reason the alfalfa did not get the proper start and many fields of fall sown alfalfa have been killed, according to L. E. Call, professor of agronomy in the Kansas State Agricultural college.

TRUCK FOR SMALL AUTOMOBILE SOLVES PROBLEM OF FARMER

Invention Makes Family Touring Car Useful for Another Purpose

The farm truck problem has been solved for the farmer by the invention of the truck attachment for the small automobile, according to E. V. Collins, instructor in steam and gas engineering in the Kansas State Agricultural college.

These attachments, pointed out Mr. Collins, can be placed upon the light automobile that has been used as the family touring car and will convert it into a serviceable one ton truck. The attachments are so arranged that 90 percent of the load is placed on the rear axle and with the gearing furnished, the small 22 to 25 horse power engine can handle 2000 pounds at a speed of from 10 to 15 miles an hour, on good roads.

The farmer can place the body which best suits his purpose on the truck chassis but care should be taken not to place a body on the truck that is out of proportion to the loads that the truck will be required to carry.

JUNIORS AND SENIORS JOIN IN EIGHTH ANNUAL PARTY

Variety of Entertainment Is Furnished—Shepherd's Crook to George Gibbons

The eighth annual Junior-Senior Prom, the biggest social event of the year, was held Saturday evening in Nichols gymnasium. Nearly 800 people were present.

The reception in the gymnasium lasted from 7 until 8 o'clock. Prominent juniors and members of the faculty were in the receiving line. The junior farce was given at 9 o'clock in the auditorium. The farce featured a senior student, "Mr. Joyne M. All," who was a member of too many college organizations.

After the farce the shepherd's crook was presented by Joe Sweet, guardian for the past year, to George C. Gibbons of the junior class.

Dancing was the main form of amusement on the main floor of the gymnasium. Music was furnished by a ten piece orchestra. A musical farce was given in the women's gymnasium for those who did not dance. Refreshments were served during the evening by sophomore girls.

EWES IN POOR CONDITION SHOULD HAVE EXTRA FEED

Close Attention Must Be Given If All Lambs Are to Be Saved—Necessary Precautions

Ewes that are not in good condition should be sorted out and given a little extra feed at this time of year, advises A. M. Paterson, instructor in animal husbandry in the Kansas State Agricultural college.

A feed consisting of 60 parts of corn, 30 of bran, and 10 of oil meal, with alfalfa or clover hay for roughage, will give satisfactory results, believes Mr. Paterson.

New born lambs are delicate and close attention must be given the flock if all are to be saved, especially when the weather is cold and damp. When the flock has not been properly cared for during the winter, the lambs are often too weak to stand, and unless given immediate attention will become chilled and die.

Pens four feet square should be provided the ewes at lambing time. These protect the young lambs from the rest of the flock and keep them from becoming separated from their mothers. If the attendant sees that the young lamb gets up and nurses by the time it is 15 or 20 minutes old there will be little need of giving it any further attention.

Twins and triplets are not uncommon and the ewe sometimes refuses to own the weakest one. In case of twins, if the stronger lamb is removed for an hour or two the ewe will turn her attention to the other lamb, and when the stronger one is put back she will own them both.

In case one of the ewes loses her lamb and another has twins or triplets, one of them should be given to the ewe that has lost her lamb. Due to the fact that the ewe recognizes her lamb by scent, there is sometimes a little difficulty in getting the foster mother to accept her new charge, but if the scent of the dead lamb is rubbed on the fleece of the lamb that is being changed the ewe will quickly claim it as her own.

VEGETABLES RETAIN LESS NUTRIMENT WHEN BOILED

Baking and Steaming Are More Economical Methods of Cooking

The importance of avoiding loss occurring in cooking vegetables is emphasized by Miss Jane Cape, instructor in domestic science in the Kansas State Agricultural college.

The ordinary method of paring Irish potatoes and allowing them to soak in water before cooking results in a great loss in the nutritive value of the vegetable, pointed out Miss Cape.

Such vegetables as peas, cabbage, spinach, and carrots, usually are boiled and the juices poured off. Many vegetables when served are consequently almost without nourishment. The soluble carbohydrates, calcium, and phosphorus necessary to build up certain tissues of the body are wasted. The amount of nutriment depends upon the amount of water and the size of the pieces of vegetables.

"It is advisable to use the juices extracted from vegetables, in sauces to be served with the vegetables or in soups," said Miss Cape.

"Baking or steaming is an economical method of cooking vegetables. Experimental work has shown the relatively small losses from steaming and the great losses from boiling vegetables. Many root vegetables may be cooked in the jacket to preserve their nutrients."

"The importance of using the minerals contained in vegetables cannot be overestimated and all farm housewives who value the health and wealth of their families should employ the method of cooking vegetables that insures against loss of any kind."

The Reclamation Record, which the federal reclamation service issues for distribution among farmers in irrigated districts, is active in urging the formation of cow testing associations. "A considerable proportion of the nearly 22,000,000 cows in the United States," it says, "are too inferior to produce profitably."

CORN FOR EARLY FEED

FEW ACRES SHOULD PROVE HIGHLY PROFITABLE THIS SEASON

Quick Maturing Varieties Will Produce Three to Four Weeks Earlier Than Others—Insufficient Seed Obtainable in Kansas

Growing a few acres of early corn for late summer and early fall feeding should prove to be highly profitable this season, believes C. C. Cunningham, assistant professor of cooperative experiments in the Kansas State Agricultural college. Since the price of corn will probably continue high until the next crop is ready for market, the farmer will likely be able to raise it much cheaper than he can purchase it.

An early variety planted as soon as conditions will permit will produce corn from three to four weeks sooner than the larger varieties ordinarily grown. The early variety may not be as productive as the ones usually grown, but the difference between the July and August and the October and November price of corn will probably more than offset a considerable difference in yield.

EARLIEST VARIETIES NOT BEST

Results of experiments show that varieties that mature in 100 to 105 days and grow to a height of six to seven feet often yield almost as well as the larger varieties, while the small 90 day varieties are not very productive.

Early varieties of corn must necessarily be grown in western Kansas because of the short season and low annual rainfall. They are hardy, vigorous growers and are excellent early varieties for growing in eastern Kansas.

NEBRASKA SOURCE FOR SEED

Unfortunately, little corn was produced in western Kansas in 1916 and seed cannot be obtained from that source. A limited amount of early corn was grown in eastern Kansas, but not in sufficient quantities to supply the demand for seed. Early varieties of corn will have to be introduced from the northern states. East central Nebraska is perhaps the best locality from which to obtain seed of early varieties of corn for growing in eastern Kansas, since conditions for the two states are somewhat similar. Iowa is perhaps the next best source of early corn.

Care should be taken to secure seed of good vitality, cautions Professor Cunningham. Because of early frost, much of the corn in these states failed to mature properly.

STANDS MUST BE THICK

Because of the small size of the stalks, early corn should be planted thicker than the large varieties. Thick stands are necessary to secure maximum yields. Varieties that mature in 90 to 100 days and grow to a height of about six feet, should average one stalk every ten to twelve inches, depending on the fertility of the soil, while the medium early varieties should be planted somewhat thinner.

The following varieties are suitable ones for growing in Kansas: Freed's white dent, Hogue's yellow dent, twentieth century yellow dent, early strains of Iowa silvermine, pride of the north, and most varieties ordinarily grown in central and northern Nebraska and northern Iowa.

Homegrown seed or seed produced under conditions similar to those under which it will be grown should be obtained if possible, as acclimated seed usually outyields that introduced from distant sources.

MILKING MACHINE WORKS WHEN PROPERLY HANDLED

Ability of Operator Determines Efficiency—Competent Man Will Use Hand Method to Better Advantage

That the efficiency of the present day milking machine depends on the ability of the operator, is the opinion of J. B. Fitch, associate professor of dairy husbandry in the Kansas State Agricultural college.

"Several new milking machines have been placed on the market in the

last few years and their manufacturers have carried on extensive advertising," said Professor Fitch. "Many farmers have been led to believe that with a machine their troubles would be at an end. As a result many machines have been sold. Although they apparently gave good results at first, many are not used now.

"In most cases where the machine has been discarded, it has been the fault of the operator. It takes an able man to operate the machine and adjust it to the cow and get good results. Satisfactory results cannot be obtained unless it is properly adjusted to the cow. An efficient hand milker will get more milk from a cow than a machine. The machine, however, will do better milking than the average farm hand. For the farmer who has trouble getting good milkers and has from 15 to 20 cows, the machine will work to good advantage.

"It is necessary, when any machine is used, to finish by stripping the cows by hand. The amount of milk received in this manner will vary from one-half to three pounds, depending on the disposition of the cow and the efficiency of the machine. As a rule, if the machine is properly handled, no more udder trouble will result than from hand milking. It is a good plan to strip the cows, even if but little milk is obtained, to determine the condition of the udder.

"In case of purebred cattle, where high records are being striven for, the milking machine is not recommended, as more care and attention usually can be given by a good hand milker. This does not always hold true, however, as the Holstein cow, Fancher Farm Maxey, which produced 46 pounds of butter in seven days as a four year old, was milked four times a day with a machine."

WIRT TO DO BIG WORK FOR AGRICULTURAL ENGINEERS

Is Named on Education and Field Machinery Committees

F. A. Wirt, head of the department of farm machinery in the Kansas State Agricultural college, has been re-appointed to the education committee and appointed to the committee on field machinery, American Society of Agricultural Engineers.

Professor Wirt prepared the comprehensive report recently presented to the association on the subject of instruction in farm machinery. The report deals carefully and in detail with the status of this study in American colleges and universities, taking up methods of teaching, research, and other topics of importance.

ONLY ONE PERSON IN 5,000 REACHES HIGH EFFICIENCY

English Home Economics Specialist Says Too Many Disregard Bad Social Conditions

"Not more than one person in 5,000 ever really attains a high state of efficiency," said Miss Alice Ravenhill, English home economics specialist, in an address before the student assembly.

"From past experiences we have founded institutions for the increase of efficiency. But in spite of all our experiences we still commit violations of law which bring about our destruction. More than \$900,000,000 is lost annually in the United States because of the carelessness of industrial workers. The death of 300,000 infants annually in this country is the result of ignorance of natural laws."

Too many persons have an indifferent attitude toward bad social conditions, believes Miss Ravenhill. Disease is a result of reckless disregard of the laws of health. In London the infant mortality can be determined from the conditions of the school children. Where the children show low vitality and poor health the infant mortality is high.

"We are all gifted in some direction of achievement," said Miss Ravenhill. "Vocational training is a result of the realization of the need of training the individual."

Miss Ravenhill gave a series of addresses at the college on home economics problems.

REAR CHICKS IN BROODER

THIS METHOD IS IMPORTANT TO PROFESSIONAL POULTRYMEN

Neither this Device Nor Incubator Is Worth While in Small Flocks, but Both Are Economical When Much Poultry Is Raised

That the importance of the brooder in rearing large numbers of incubator chicks cannot be overestimated, is the opinion of N. L. Harris, superintendent of the Kansas State Agricultural college poultry farm.

"Some artificial means of brooding chicks must be provided when incubator chicks hatch in cool or cold weather," said Mr. Harris. "Where a small flock of birds is to be raised it is not profitable to use either the incubator or brooder, but where large numbers of chickens are handled the brooder becomes a matter of convenience.

LABOR IS CUT DOWN

"Keeping chicks in large flocks minimizes the labor and reduces the cost of houses and yards. Where hens are used for brooders in cold weather only a few chicks can be given to each hen. This requires a large number of coops and the attendant is compelled to give each group nearly as much attention as would be required for one large flock cared for by the brooder."

A large percentage of the hen brooded chicks suffer from the effects of head lice, Mr. Harris pointed out. These not only are bothersome to the newly hatched chick but continue to be a source of trouble through the entire season.

HOMEMADE BROODER PRACTICABLE

Where hens are not available and only a few chicks are to be raised it is possible to construct a homemade brooder. These usually require considerably more attention than those on the market but will give fairly good results.

The most common method of heating these homemade brooders is by means of a jug of hot water. A box which contains sufficient room for from 50 to 100 chicks and which is tight on all sides excepting the front, is the first requirement. Some method of ventilation should be provided on the top of the box. A two gallon jug of hot water furnishes the heating plant. The jug should be wrapped in burlap to protect the chicks and aid in retaining the heat. This brooder will keep a limited number of chicks perfectly comfortable.

GUARD AGAINST FIRE DANGER

There are nearly as many makes of brooders on the market as there are incubator factories in the country. Many of these brooders are so cheaply constructed as to be in constant danger of fire. Many small brooders are on the market, however, which are practically fireproof and which have a capacity of from 50 to 100 chicks.

Among these are the so-called portable hovers. These machines are convenient and sanitary, and when the durability is considered, are quite cheap. They are readily moved from one place to another. Several of them can easily be kept in an old building which is tight enough to keep out the wind and weather.

NEW BROODERS ON MARKET

Another extensively used type of brooder of the same size is the adaptable. This is more expensive than the portable hover but can be used outdoors or in an open shed. The latest form of brooder to appear on the market is the colony type. Many such are heated by kerosene.

Kerosene heated machines have the advantage of requiring little attention. The supply tank is filled once or twice a week and the regular degree of heat may be maintained throughout the entire time. These, however, are not as commonly used as the stoves burning anthracite coal.

FOR 600 TO 700 CHICKS

The colony type of brooder has a capacity of from 600 to 700 chicks. Where sufficient incubator capacity is

in use to justify the purchase of such a brooder, there is no more practicable way of raising early hatched poultry, Mr. Harris believes. Where chickens are raised as a business a good brooder is indispensable.

While the brooders have some disadvantages where early hatched chicks are to be raised this is the only available method of successfully handling chicks in large numbers.

DECISION FOR MINIMUM WAGE IN DOUBLE DEBATE

Affirmative Aggie Team Wins, Negative Loses—All the Speakers Young Women—Next Contest March 23

The Washburn girl debaters suffered defeat at the hands of a Kansas State Agricultural college debating team here Friday night. The girls' affirmative team of the agricultural college won at Manhattan, while the negative team lost at Washburn. The question of minimum wage scales in the United States was debated.

The Aggie affirmative team was composed of Miss Lucile Norwood of St. Joseph, Mo., Miss Lois Bellomy of Manhattan, and Miss Rose Baker of Topeka. Members of the Washburn negative team were Miss Flora Harrington, Miss Erma Erickson, and Miss Mabel Jones. Those on the Aggie negative team were Miss Donna Faye Wilson of Wichita, Miss Mae Sweet of Burlington, and Miss Laura Mueller of Wichita.

Miss Estella Boot, assistant professor of English, accompanied the team to Topeka. After the local debate the Zeta Kappa Psi sorority entertained the debaters and the judges in the Browning-Athenian hall.

The pentangular debate will be next in order, the first series taking place March 23. The affirmative team will meet Baker here and the negative team will meet Ottawa at Ottawa.

"The chances in the pentangular are bright," said Prof. Don L. Burk, debate coach. "The men are working hard."

The second series will be held April 13, when the affirmative team will meet the College of Emporia at Emporia and the negative team will meet Washburn here.

PLANT CORN OR KAFIR IF WHEAT HAS WINTERKILLED

Sorghum Crops Desirable for Central and Western Kansas, Says Crop Specialist

Mr. Farmer, has your wheat blown out or winterkilled? If so plant corn or kafir in its place.

Kafir is preferable for western Kansas while in the eastern section of the state corn is recommended by G. E. Thompson, specialist in crops in the division of extension, Kansas State Agricultural college.

"Kafir and milo are now selling for more than corn, and as they stand dry weather and are practically certain to make as many or more bushels to the acre than corn in central or western Kansas, they should be given a good share of the wheat ground where wheat has been killed," said Mr. Thompson. "Find out the best variety for your particular neighborhood. Get the seed early, test it to make sure that it is good, plant it and give it good care, and it will not disappoint you."

COUNTY AGENTS TRY JAPAN CLOVER FOR PASTURE CROP

It's Expected to Prove Especially Valuable in Southeastern Kansas

Lespedeza, or Japan clover, which is expected to be valuable in Kansas for pasture purposes—particularly in the southeastern section of the state—is being tried out by county agents in cooperation with the agronomy department of the Kansas State Agricultural college. Some farmers have already reported excellent results.

This clover is commonly grown in the lower Mississippi valley and to some extent throughout the southern states. It is a summer annual and like other legumes adds nitrogen to the soil, according to G. E. Thompson, specialist in crops, division of extension, Kansas State Agricultural college.

POLISH NEEDED IN HOME?

THEN MIX PREPARATION YOURSELF. IS ADVICE OF CHEMIST

It Will Cost Less and Be Just as Good—Clean, Cold, Water Effective in Many Cases—Dry Rooms Injure Furniture

Commercial furniture polishes are no more effective than some of the simple and inexpensive preparations for keeping furniture in good condition, according to P. J. Newman, assistant professor of chemistry in the agricultural college.

When the polish on furniture becomes dull take a soft sponge, moistened with clean, cold water, and wash the article, Mr. Newman suggested. Then wipe it clean with a soft, damp chamois skin. Dry the skin as well as possible by wringing it. Wipe the water off of the furniture, being careful to wipe in only one direction. Never use a dry chamois on varnished work.

WHEN VARNISH IS DEFACED

If the varnish is defaced, and shows white marks, take boiled linseed oil and turpentine in equal parts and apply a very small quantity with a soft rag until the color is restored. Then with a clean soft rag, wipe the mixture entirely off, being careful to remove all the linseed oil and turpentine.

In deeply carved work use a stiff-haired paint brush instead of a sponge to remove the dirt from the grooves. The bluish white coating which collects on furniture, especially pianos and other highly polished surfaces, may easily be removed as previously directed.

TREATING BRUISES ON FURNITURE

To remove bruises from furniture, moisten the part with warm water, double a piece of heavy brown paper five or six times, moisten it thoroughly with warm water, and lay it over the bruise. Place a moderately hot iron on the paper until the moisture is evaporated, being careful not to expose the wood to the direct heat of the iron. If the bruise has not disappeared, repeat the operation. After two or three applications the bruise will be raised level with the surface. The polish may then be restored by the method already given.

An excellent furniture polish is a good grade of floor wax. Bruises and scratched places can be removed fairly well by treating them with floor wax. If the furniture contains a depression or gouged place, fill it with ordinary paraffin and polish it with floor wax.

GOOD POLISHES ON MARKET

The commercial furniture polishes are often poor and always expensive, in the opinion of Mr. Newman. A number of good polishes are on the market, however, that can be used with satisfactory results. If polishes are used, care should be taken not to leave them on for any length of time or they may act detrimentally on the varnish, causing it to become gummy and dull.

Dull finished furniture sometimes becomes shiny through use and loses some of its beauty. This may be remedied by going over the shiny parts with a soft chamois wrung out of water as dry as possible.

MILK AND WATER HELP LEATHER

Watch the humidity of the room, especially in cold weather. Care should be taken to use devices that will keep moisture in the atmosphere. The water tank in a hot air furnace, for instance, should always be kept filled with water. Too dry a room will cause the joints of the furniture to become loose and spread.

If leather upholstery gets too thoroughly dried out, it may be restored to good condition by treating it with a mixture of one part of sweet milk and one part of tepid water. Simply scrub the leather thoroughly with a rag or brush. Dry it thoroughly with a clean, soft cloth and rub it to a polish. If this treatment is given two or three times a year, the leather upholstery will remain in excellent condition indefinitely.

THE KANSAS INDUSTRIALIST

Volume 43

Kansas State Agricultural College, Manhattan, Wednesday, March 21, 1917

Number 23

TREAT FOR ART LOVERS

FESTIVAL WEEK PROGRAM GIVES EXCEPTIONAL PLEASURE

Music and Public Speaking Departments Co-operate in Presenting Entertainments—Cecil Fanning Makes Brilliant Impression

Lovers of music and drama in the community of Manhattan were given a treat of exceptional quality in the program of the first annual festival week presented under the auspices of the departments of music and public speaking in the college auditorium March 13 to 18.

A. E. Wesbrook, director of music, and Dr. J. G. Emerson, head of the department of public speaking, presented the series of entertainments of the week in order to show to the pub-

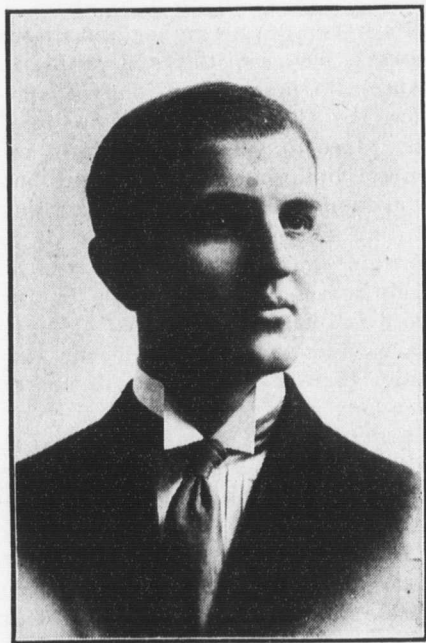


PROF. A. E. WESBROOK

lic that real talent exists in the community of Manhattan and in order that the people might be given an opportunity to see and hear music and drama equal to that heard in the larger cities.

CONCERT AND OPERA PLEASE

The first number of the series was an orchestral concert given Tuesday evening, March 13, by the college orches-



DR. J. G. EMERSON

tra under the direction of R. H. Brown, assistant professor of music. The entertainment was one that would have been creditable to even a larger orchestra composed of professional musicians.

The second entertainment of the week was the popular English opera, "Robin Hood," presented by the college glee clubs. This was adjudged the best entertainment of its nature that has ever been given at the college by college talent. The chorus was perhaps the strongest feature of the

evening but the soloists showed exceptional skill in the manner in which they carried their parts. The entire cast showed the results of the expert training which they had received under the direction of Professor Wesbrook.

PURPLE MASQUE IN PLAY

"The Man from Home," a four act comedy drama, was presented Saturday evening by the Purple Masque under the direction of Doctor Emerson. The cast for this play gave an exhibition equal to that of a professional company. Each part was acted in an admirable manner.

Cecil Fanning, America's great interpretative baritone, gave the most delightful vocal concert Sunday afternoon that has ever been given here by a visiting artist. Mr. Fanning is both a poet and a singer. He writes poetry and interprets it to his audience in song.

Mr. Fanning's artistic skill lies in the wonderful feeling that he is able to express in his songs and in his charming personality. He was accompanied by his friend and adviser, H. B. Turpin, who has been his teacher since Mr. Fanning began the study of music.

CLOSES WITH SACRED CONCERT

The last number of the festival week was a sacred concert given by the college choral society augmented by the Clay Center and Randolph choruses. Mrs. Margaret Lester, one of Chicago's most prominent sopranos, was the assisting artist from out of town. Mrs. Lester created a most favorable impression. She has a winning personality which, combined with her clear lyric voice, makes her work most attractive.

"I am well pleased with the manner in which the people of the Manhattan community have co-operated with the college in the whole program of the week," said Professor Wesbrook. "The things that we have been able to do show that we have excellent talent in this community. It was a matter of finding and developing it." "The whole community of Manhattan should be grateful to Professor Wesbrook for having originated and carried out the idea of the festival week," said Professor Emerson. "The public speaking department considered it a privilege to be invited to participate in the program of the week."

BAD HABITS ARE CAUSE OF MANY PREVALENT DISEASES

Morals of Present Generation Below Those of Earlier Time, Thinks Doctor Evans

Bad habits are the cause of much of the disease so prevalent throughout the country. This therefore might be eliminated by better living, according to Dr. W. A. Evans, professor of hygiene in Northwestern university, and a contributing editor of the Chicago Tribune, who spoke Thursday before an audience of students and faculty members in the Kansas State Agricultural college.

"Although the death rate of the whole American people is decreasing, that of men more than 50 years of age is on the increase," said Doctor Evans. "This is due to incorrect living and might be remedied. The morals of the present generation are not so good as those of the men of a half century ago."

"It is interesting to study vital statistics in regard to the lengthening of the average life. This lengthening has not taken place in later life but rather in the lengthening of the child life. Statistics show that the baby death rate, the child death rate, and the child sickness rate are decreasing. It is found that the improvement in the health of the population as a whole is due to the improvement of the child life rather than the adult life."

DO NOT BLAME FARMER

HE'S NOT RESPONSIBLE FOR HIGH COST OF LIVING

Average Price of Products for Last Few Years Is No More Than He's Entitled to, Says Agronomist—Would Increase Production

The farmer is not to blame for the high cost of living. The average price received for farm products for the past two or three years is no greater than the farmer has been entitled to, according to L. E. Call, professor of agronomy in the Kansas State Agricultural college. Increased cost of equipment and labor and the necessity for maintaining the fertility of the soil must be considered, Professor Call points out, and these have added greatly to the cost of agricultural production.

On the other hand, the farmer should not be excused if he fails to stop the leaks in the farm business, in the opinion of Mr. Call. The waste brought about in burning corn stalks, straw, and other organic matter is close to criminal.

THREE METHODS ARE POSSIBLE

There are three ways to increase the production of grain crops, by increasing the acreage of crops under cultivation, by more thorough and intensive cultivation, and by growing only crop varieties adapted to local conditions.

It would not be advisable, however, Mr. Call believes, to follow the English plan and place under the plow a larger proportion of meadow and pasture land in Kansas. Much of this land in the state is of inferior quality, and when plowed would be very difficult to reseed to grass. Moreover, much of the land now under cultivation is not producing so abundantly as it could.

PREPARE GOOD SEEDBEDS

"While it is desirable to bring every acre possible under cultivation," said Professor Call, "it is not advisable to attempt to handle more land than can be properly farmed. The ground now under cultivation should be prepared for spring crops in the best possible way. With reasonable assurance of high prices for corn and kafir, more than the customary amount of work can be expended profitably in preparing a seedbed for these crops."

"Ground that is to be listed to corn or kafir should be blank listed or disked as soon as possible this spring and if weather is favorable and time will permit a second disking at right angles to the first would prove beneficial. After the crop is planted as much time as possible should be spent with a cultivator in the fields during the early growth of the crop. Weeds can be most easily killed at this season and an extra cultivation at this time of the year may increase the yield greatly."

SORGHUMS MEAN PROFITS

"Sorghums in the average season are, with the exception of alfalfa, the most profitable crops grown on the average Kansas farm. A good seedbed for kafir is even more important than a good seedbed for corn."

Nothing can be done at this time to increase the yield of the coming wheat crop, declared Professor Call, but it is not too early to plan for the 1918 crop. Should there be a heavy loss of the present crop from winterkilling, it would not be advisable to put more of this ground to spring crops than can be properly handled with the equipment of the farm. It would be better to hold the rest in reserve to be prepared by plowing in May or June for a crop of wheat next season. In many instances in the western part of the wheat belt, land handled in this way produces more than double the yield of ground plowed late and poorly prepared.

Wheat and oats ground that is to be seeded to wheat this next fall should also be plowed as early in the summer as possible.

SPRING WHEAT WON'T PAY

Professor Call emphasized the importance of planting only crops adapted to local conditions. Spring wheat, he pointed out, is one of the most unprofitable crops in Kansas. Spring grain, such as oats and barley, though not highly profitable, are much more so than spring wheat. Tests for 10 years show the production of oats to the acre to be between five and six times that of spring wheat.

Care should also be taken, said Mr. Call, to see that the best variety of a crop is secured for planting. This is particularly important in the case of corn. While good seed corn is scarce in the state this season, there is enough seed in almost every county if properly distributed.

Other grain crops, while not so sensitive to soil and climate as corn, will nevertheless yield much higher if acclimated seed is planted. The present wheat crop will suffer a loss of perhaps a million bushels, Mr. Call predicted, because soft wheat was extensively sown last fall in the hard wheat belt of Kansas.

COLLEGE MEN PRESENT AT STATE FOOD CONFERENCE

Doctor Waters and W. J. Burtis Preside Over Sessions—More Than 150 Attend Meeting

Many Kansas State Agricultural college faculty members and alumni attended the food conference called by Governor Capper at Topeka Friday. Dr. H. J. Waters, president of the college, presided over the morning session, while W. J. Burtis of Fredonia, a graduate of the college, was chairman in the afternoon. Addresses were made by Doctor Waters; Mr. Burtis; Dr. W. M. Jardine, dean of agriculture; R. M. Sherwood, acting professor of poultry husbandry; and W. A. Cochel, professor of animal husbandry.

More than 150 of the progressive farmers, bankers, and business men attended the conference, which recommended that a federal food commission be created with a power to control and regulate the storage, distribution, and transportation of food products. This, it is believed, would put an end to manipulation of these articles for speculative purposes.

The banks were asked to cooperate so far as possible with the farmers in purchasing seed. The farmers were urged not to break up their pasture lands, as the welfare of the state in the future will depend more and more upon live stock.

IT PAYS TO RAISE GUINEA FOWLS IN KANSAS—HARRIS

Birds Are Salable for Meat, Says Superintendent of Poultry Farm

Raising guinea fowls in Kansas is profitable, according to N. L. Harris, superintendent of the Kansas State Agricultural college poultry farm.

"Large farms are now being established where guineas are raised for meat purposes," said Mr. Harris. "The eggs are small and consequently are of little value commercially."

"Guinea fowls are easy to raise. They are noisy and good fighters and are not subject to the attacks of hawks."

"There is a good market for guinea fowls in Kansas City. The meat of the young guineas resembles that of prairie chickens and wild ducks. The clubs and stylish cafés use the guineas as a substitute for ducks, prairie chickens, quail, and other game which the laws make it impossible for them to secure."

LARGE FIELD FOR WOMEN

ADVERTISING OFFERS SPECIAL OPPORTUNITIES, SAYS HUGH McVEY

Feminine Purchases Form 78 Per Cent of Retail Business—Editorial Experience Is Big Asset to Person on Business Side of Publication

The advertising field offers unusual opportunities to women, in the opinion of Hugh McVey, advertising counselor to the Capper publications, who spoke Friday to students in industrial journalism in the Kansas State Agricultural college.

Seventy-eight per cent of the goods purchased in the retail market are bought by women, the speaker pointed out. The advertising written by women appeals better to these buyers, and, moreover, the intuition displayed by the feminine mind is valuable in any type of advertising work. Many women are now employed as advertising managers of large commercial firms and in other capacities in the same field of work.

AMERICANS BUY ADVERTISED GOODS

Advertising, Mr. McVey showed, plays a tremendously important part in the lives of the American people. "Practically everything with which we come into contact consists of advertised articles," said Mr. McVey. "The food we eat, the clothes we wear, the automobiles in which we ride, the homes in which we live, the literature which we read, are acquired as a result of advertisements."

NOW SOLD THROUGH DEALERS

"Mail order advertising came first, and most farm papers were built up by its use. Today most of the advertised goods are sold through the dealer, which is the best way."

Editorial experience is a great asset to the advertising specialist, in the opinion of Mr. McVey, who was formerly an editorial man. The advertising man or woman must know the aims and policy of the paper. He must know on what line to meet prospective advertisers. The prestige of a paper sells space. Territorial data in a farm paper are highly important.

PICTURES FORM SHORT CUT

"The use of pictures in advertising as well as news is becoming more and more common," said Mr. McVey. "The picture is a short cut in getting information into the mind. Some industries have made better use of pictures than others."

The buying power of farm communities is usually underestimated by manufacturers, according to Mr. McVey. Survey work done by him shows that farmers buy the most expensive goods of any class of people. Mr. McVey spoke briefly of his tractor analysis, which has attracted wide attention among advertisers and other persons.

CAPTAIN MATHEWS TO FORM RESERVE CORPS IN DISTRICT

Is Commissioned by War Department to Recommend Number of Officers

Captain L. O. Mathews, commandant of cadets, has been commissioned by the war department to organize throughout this congressional district the officers' reserve corps.

The officers are commissioned immediately by the president in grades from second lieutenant to major in any branch of the service. No duty is required in time of peace, except at the request of the officer concerned, when he may be detailed with a regular army unit with the pay and allowance of his rank for 15 days or more in one calendar year.

Officers commissioned are privileged to wear a uniform of their rank on all occasions of ceremony.

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N. A. CRAWFORD Managing Editor
J. D. WALTERS Local Editor
ADA RICE, '95, M. S. '12 Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

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WEDNESDAY, MARCH 21, 1917

THE FOOD CONFERENCE

Thirty-eight cents would buy in 1896 what it takes \$1 to buy now. The purchasing power of \$1, in other words, is but little more than one-third what it was 20 years ago. These figures, based on reliable computations made by the United States department of labor and by mercantile agencies, show as nothing else does the cost of living at the present time.

It was in recognition of these facts that Governor Capper called the food conference in Topeka last week. In most states a few years ago, and probably in some even now, such a conference would have been viewed with alarm. An official should be satisfied if he does merely what the statutes require him to do, reactionaries would have said. People in Kansas, however, are fortunately less concerned with what has been done in the past than with what will benefit the public. Governor Capper saw the need for co-operation among producers, distributors, and consumers, and called the conference to meet this need. His action represented the modern idea that whatever concerns the public welfare should interest the officials of the state.

The fact that the conference was not a body constituted by law did not in any way affect its efficiency. Resolutions were adopted looking toward efficiency in production and distribution of foodstuffs, and these recommendations, coming from the progressive and representative body of men assembled at the conference, will be carried out as thoroughly as though they had been embodied in the resolutions of a law making body.

DEMETER VERSUS MARS

According to a certain theory of evolution, the female principle dominated the origin of life, in other words, Eve was not made from Adam's rib, but there may be some truth in the story if it is read the other way round.

In Greek and Latin mythology, the powers which control the fruitfulness of the earth are all female. Demeter was goddess of agriculture, Fortuna carried the horn of plenty. But the powers which wrought destruction—Time, War, and Death—were all masculine.

The great war puts both the old myths and the new sciences to the test and seems to prove both right. Not to Mars, god of battles, but to Demeter, the lady of the fields, must go the glory of winning this war, according to a general belief.

In Europe the farmer is regarded as of equal importance with the munition maker and the soldier. Agriculture is recognized by all military authorities as a chief source of national defense. Consequently a marvelous new science of agriculture is being developed by the warring nations and parallel to it in this country is the work of the agricultural experiment sta-

tions which the government has established in each state.

The trained farmer is doubtless as essential as the trained soldier to any scheme of nation preparedness. And better farming processes mean cheaper food for the people in times of peace. Provided—the distribution of foodstuffs, its transportation and methods of marketing are managed in a fair way.

The annual fall spectacle of acres of choice fruits left to rot, on account of car shortage, and of thousands of dozens of eggs, spoiled in cold storage on account of price manipulations, is one to discourage the great goddess Demeter herself, not to mention her devotees, the farmers.—Wichita Beacon.

MASS THE SHRUBBERY

With but few exceptions, shrubbery gives its best effects when massed. Single specimens often appear well, but as a rule a considerable number of them growing together in one clump will add strength and naturalness to the planting. Where we find one oak tree, there will be, unless destroyed by man, a number of them. Instead of one sumac, we see a whole colony of them. We should follow nature's suggestions when she gives them to us.

The mass may be made up of a single kind of shrub or tree, or several. They should be set far enough apart to give freedom for growth. Where several kinds are used, those smaller in ultimate stature should stand in front of the taller ones.

If no more than a dozen plants are to be purchased, get only two or three rather than a dozen different sorts, and mass the similar ones.—Kansas Farmer.

LIGHT VERSUS NOISE

We heard a story not long ago that might very appropriately be used to illustrate many of our activities, individual and collective, journalistic, political and legislative.

A resident of a certain city was entertaining a number of his friends one evening, when the electric lights suddenly went out, to the great inconvenience of the company. The gentleman had an electric bell system, and it occurred to him that he might get light by hooking up the light system with the batteries used to ring the bells. He tried it, but with no result. The next day, when the electrician came to fix the trouble, and saw what the gentleman had tried to do, he laughed, and said:

"You didn't think you could get any light worth while in that way, did you? Don't you know it takes five hundred times as much power to produce light as it does to make a noise?" —Wallaces' Farmer.

A TIME TO THINK

Man in the process of evolution has got rid of his fur, or feathers, and every day he must put on something to take the place of fur, and every night he must take off the artificial clothing.

There is apparently no greater waste of time than the time that is spent in dressing and undressing.

Bathing, shaving for men and powdering your nose for women, finding what you want to wear and putting it on—it is a tiresome part of every day.

But—The hours in which a human being grows and develops mentally are the hours of solitude.

And a great many of us are practically never alone, except when we are getting dressed or undressed.

Sleep is a time of idleness—no growth there.

When we are with others we listen, learn, perhaps, and debate, but we don't really think with intensity.

The one thing that makes you more of a man than you were last year is intense, solitary thought.

Why not say to yourself: Since I must spend at least 330 hours a year in dressing and undressing, in bathing and shaving and looking for my collar button, I'll also spend that time in thinking.

Do you know how many men spend 300 hours a year in actual, concentrated thought?

Not one in a thousand.

Suppose you see what you can make out of the hours lost in putting on and taking off the artificial fur and feathers and how much you can grow in the thinking.—Chicago American.

A QUARTER CENTURY AGO

Items from The Industrialist of March 19, 1892

The selection of speakers for commencement will probably be made next week.

"Freehand Drawing" for use this term, and about the same number will be needed for the spring term.

The Downs Times has frequent letters from "Student," describing the various departments of the college with interest and accuracy. Other students might do good work for their neighbors and the college by similar letters.

The adjutant general has decided that every military college receiving arms and ammunition from the national government for the purpose of instruction, and to which an officer of

Science and Industries

The Scientific American

DESPITE all the misery and suffering it has caused, we have this war to thank for forcing upon the world a widespread interest in and appreciation of the value of science. Nations which have looked upon science as of little utilitarian value, have been forced to change their attitude. The world over, men are seeking the aid of science to develop natural resources and to improve processes of manufacture. There is danger, however, that in looking upon the commercial side of research work we are apt to overlook the benefits that may accrue from the pursuit of pure science research.

For centuries before the dawn of the present era men were engaged in a purely utilitarian pursuit of chemical research. Two will-o-the-wisps led them on: the transmutation of baser metals into gold, and the elixir of life which would give man eternal youth. While these were the goals, chemical progress was at a standstill. Then came Boyle, who determined to pursue chemical research with no utilitarian object in view, but merely to add to the world's store of knowledge. From that date, side by side with pure research, there has been a steady progress in applied chemistry.

There is no reason why this country should not be a leader in applied science, but we must not forget that applied science still walks hand in hand with pure science.

A number of our large manufacturing concerns are equipped with large research laboratories where their products and processes may be investigated and raised to a high degree of efficiency by scientific exploration. Since the war began these laboratories have been called upon to deal with problems that seemingly have no relation to the work with which the owners of the laboratory are concerned, and yet the ramifications of science are so intertwined that it pays to engage in such apparently extraneous investigations.

Recently a visitor to the laboratories of a large electrical company was astonished to find that not only did the work of the laboratory cover widely divergent fields of chemical exploration, but that there was a great deal of pure chemical research done there. There was even a department devoted to mathematical research. Naturally he was astonished to find an industrial institution appreciating the value of such abstract work. Later upon meeting the vice-president of the company he was informed by that individual that the experience of the company had proved the commercial value of pure science research. The laboratory, he stated, was indispensable to the success and progress of the company. It had proved their best paying investment and although certain lines of research had at first been questioned the company had come to rely absolutely upon the judgment of the director even when he asked for investigation of subjects that appeared to have not the remotest connection with their work. It has all paid in dollars and cents.

A. O. Wright, '91, returned on Monday from Burr Oak, where he has been teaching.

Mrs. C. C. Gardiner of Bradford is visiting her children, Mrs. J. T. Willard and E. A. and Maud Gardiner.

The college orchestra is practicing for the Speer-Winans association, which meets in Manhattan April 1 and 2.

Sweet strains from a large music box formed an entertaining prelude to the chapel exercises yesterday afternoon.

Professor Walters has accepted an invitation to deliver the address in connection with the graduating exercises of the Randolph schools on May 6.

Miss Lottie J. Short, '91, had full practice in her postgraduate work in cooking this week in managing the class and lunch in Mrs. Kedzie's absence.

The printing department has published 15 plates of Professor Walters'

the United States army has been detailed as professor of military tactics, must display the national flag on all occasions when, under army regulations, the use of a flag is called for.

Last Wednesday evening the members of the agricultural and cooking classes, numbering about 100, were entertained by Professor and Mrs. Georgeson. The early part of the evening was spent by the young gentlemen in making bonnets for the ladies, while the ladies fashioned neckties for them. Most of the bonnets proved to be wonders of millinery art, while many of the neckties, though not so elaborate, were fully as wonderful. Mrs. Kedzie and the post-graduate girls served the refreshments, which, of course, were excellent. The remainder of the evening was spent in having a social time and collecting autographs. All went home thanking Professor and Mrs. Georgeson for the pleasant evening they had furnished, only regretting that the second-year party is one of the things that come but once in a lifetime.

MUSIC I HEARD

Conrad Aiken

Music I heard with you was more than music,
And bread I broke with you was more than bread.
Now that I am without you, all is desolate,
All that was once so beautiful is dead.

Your hands once touched this table and this silver,
And I have seen your fingers hold this glass.
These things do not remember you, beloved;
And yet your touch upon them will not pass.

For it was in my heart you moved among them,
And blessed them with your hands and with your eyes,
And in my heart they will remember always;
They knew you once, O beautiful and wise!

SUNFLOWERS

Many a man who tries to be outspoken in conversation finds himself outtalked.

Our old friend Nick, the erstwhile czar, ought to be able to land a fairly good contract in vaudeville.

A woman who wants her husband to spade up a garden is almost as reasonable as a hen that wants to "set."

"The ancient peoples had a god for everything," remarked Mrs. Wood B. Hibrow. "Even for the kitchen, you know, there was Pan."

THE LIVERY STABLE

At a public sale of a livery stable's equipment at Lafayette, a few days ago, some fine examples of the coach builders' art, which a few years ago cost more than a good automobile costs today, were knocked down at \$2 apiece. A sleigh—who remembers when sleighing was considered the most exhilarating of winter sports?—which cost \$500, was sold for 50 cents, and a rubber-tired buggy which cost \$1,000, was sold for \$10. This does not mean that the buggy has been crowded off the road, for in the rural districts a great many buggies still are sold, it being suspected that for general courting purposes they are vastly superior to anything in the vehicle line yet invented.

But certainly the livery stable must by this time find business dull. Thus passes a great institution, where the wits were wont to gather and discuss horses, men, politics and crops, but especially horses. In many a small town the livery stable office was really the place to get a true insight into public opinion. The traveling men who came to engage a rig were always willing to discuss the affairs of the outside world, the farmers who left their horses to be fed, while in town were as likely as not to loaf about the barn while their wives did the shopping, there to discuss crops and the weather, and, of course, no young man could hire a narrow seated rig without revealing, either by his actions or his speech, the progress of his affairs of the heart.

But it is to be doubted if the real hero of the livery stable—the livery stable horse—will shed many tears over the passing of the livery stable. It was his lot to be driven almost every day by a strange hand. Often he was abused by persons who urged him beyond his powers, and who neglected to water him. Sometimes he was called upon to do his own driving, the lines having been intrusted to the dashboard. And, it must be admitted, he was frequently called upon to make good the promises of his owner, who, upon occasion, did not hesitate to recommend him as being far superior to any horse that ever wore a shoe. This versatile and patient beast has about had his day. It is even possible that after leading such a life he is glad to drag cannon around over a European battlefield.—Indianapolis Star.

AMONG THE ALUMNI

W. L. Hall, '98, of the United States forestry bureau, was a visitor at the college Friday.

Miss Edna Danner, '14, who is teaching in the Axtell high school, has been visiting in Manhattan.

Harry B. Brown, '15, and wife were recent visitors at the college. Mr. Brown is engaged in electrical engineering work in Canada.

Miss Florence Justin, '16, left Wednesday, for Sioux City, Iowa, where she will visit her sister, Mrs. T. P. Haslam, for several months.

L. R. Light, '15, has gone to Dillon, Mont., where he has accepted a position as director of rural education in the Montana State Normal college.

Miss Evelyn Marie Potter, '15, of Barnes, has accepted a position as teacher of domestic science and art in the rural high school at Grainfield.

Miss Eva Hostetler, '16, has been compelled to give up her work as instructor in English in the high school at Kearney, Nebr., on account of illness.

A. C. Berry, '16, is in charge of the cattle on the Santa Fé dairy and poultry special now touring the state. Mr. Berry lives at 615 Polk street, Topeka.

Mrs. Edith (Justin) Haslam, '08, and children, left Wednesday, for Sioux City, Iowa, where her husband, T. P. Haslam, '08, has become research bacteriologist for the Purity Serum company.

Miss Anna Virginia Layton, '16, who is teaching English, history, and domestic science in the high school at Kensington, visited last week with her parents at Blue Rapids and with friends in Manhattan.

Frank P. Root, '14, who is teaching agriculture and physical training in the Winfield high school, spent the week end visiting friends in Manhattan. He recently purchased a farm near Iola and will improve it in the spring.

W. E. Lyness, '16, spent the week end visiting friends in Manhattan. He is in the employ of the government and until recently was stationed at Akron, Col., but has been transferred to Archer, Wyo., with an advance in salary.

The Kansas City alumni will hold their annual reunion at the Coates house April 6. Arthur Helder, secretary, would consider it a favor if all alumni in that vicinity would send in their names at once, as his list is not up to date.

W. R. Reeves, county agent for Crook county, Wyoming, writes from his headquarters at Sundance: "Inclosed herewith you will find money order in the sum of \$1, in payment of my annual dues. I would very much like to be back to the college at commencement time, but it would be impossible this year. I read THE INDUSTRIALIST each week, and hope for the success of old K. S. A. C."

Mrs. Ruth (Gilbert) Burns, '14, incloses her Alumni association dues and writes: "The Kansas State Agricultural college folks in New York meet occasionally for jolly good times and we residents are always glad to know of the alumni who come here for study or short periods. Our annual banquet will be held next month so we anticipate a happy reunion. I am hoping to visit dear old Alma Mater at commencement time this year."

BIRTHS

Born, to Mr. Harold Amos, '16, and Mrs. Olive (Wright) Amos, of Manhattan, on Tuesday, March 13, a son, Max.

MARRIAGES

HALADAY-HARNER

Miss Bertha B. Haladay and James W. Harner, '09, were married at Newton, Miss., on March 14. They will reside for the present at Lucedale,

Miss. Mr. Harner is in the service of the bureau of animal husbandry, United States department of agriculture.

KANSAS CITY REUNION

Friends and Former Students of the College:

The alumni meeting of the Kansas City branch of the alumni of the college will be held at the Coates house, Friday evening, April 6. There will be no set banquet but light refreshments will be served.

Come out and show the members of the faculty who will be present, how many of you there are in the city and vicinity.

ALBERT DEITZ, President.

ARTHUR H. HELDER, Secretary.

MANHATTAN RAISES \$1,200 FOR CHILDREN IN BELGIUM

Faculty Members, Students, and Townspeople Subscribe Liberally to Fund

The students of the Kansas State Agricultural college and the people of Manhattan raised more than \$1,200 for the relief of the Belgian children in a campaign carried on by the students and townspeople. Nearly \$700 of this amount was given by faculty members and students.

Two concerts were given, one at the student assembly and one Wednesday evening at the Presbyterian church, by Joe S. Marshall and Mrs. Ina Few Longfellow. Mr. Marshall is a Kansas boy, having been born and brought up in Concordia. He is a graduate of the University of Kansas and Harvard university and has served in the French ambulance corps and on the Belgian relief committee.

Mrs. Longfellow has a high, clear soprano voice. Mr. Marshall's baritone solos pleased his audience. After the concert Mr. Marshall made a short talk, telling of conditions in Belgium. Dr. H. J. Waters, president of the college, also made a plea for funds for the Belgian relief.

MISS MARY DAKIN IS FIRST IN ANNUAL BEAUTY CONTEST

Junior in Home Economics Receives Largest Vote in Classbook Competition

Miss Mary Dakin of Ashland won first place in the beauty contest held by the committee in charge of the 1917 Royal Purple. Miss Dakin is a junior in home economics and prominent in student activities. Second place was won by Miss Merle Beeman of Topeka; third, Miss Ann Walker of Dalhart, Tex.; fourth, Miss Margaret Hale of Lebanon; fifth, Miss Helen Blank of Emporia; sixth, Miss Fayne Bondurant of Ness City.

WALDO HEPPE TAKES MEDAL IN STOCK JUDGING CONTEST

Agronomy Student from Iowa Wins in Saddle and Siroloin Club Event

Waldo Heppé of Burlington, Iowa, senior in agronomy, won the gold medal in the annual live stock judging contest under the auspices of the Saddle and Siroloin club. Mr. Heppé scored 587 points out of a possible 800.

H. M. Birks of Hays, junior in animal husbandry, won second prize, a silver medal, with a score of 585 points. J. L. Lantow of Lyons received a score of 563 points and a bronze medal. S. J. Molby of Manhattan also received a bronze medal with a score of 556 points.

Twenty-two prizes were given in all. Besides the medals, ribbons were given to the 10 highest men on all classes. A notable feature of the contest was the ranking of Miss Blanche French, junior, of Hamilton and Miss Luella Schaumburg, freshman of La-Crosse, both of whom are enrolled in the agronomy course. Miss French ranked first on horse reasons and Miss Schaumburg on sheep reasons.

This was the biggest stock judging contest ever held at the college, according to Dr. C. W. McCampbell, professor of animal husbandry, who with C. M. Vestal and A. M. Paterson judged the competition. One hundred and seventy-five students entered the contest.

TREES FOR FENCE POSTS

OSAGE ORANGE AND CATALPA ARE BEST FOR KANSAS

Former Will Outlast Other Woods, Says Prof. Charles A. Scott—Planting Time Is Nearly Here—Suggestions for Care

Osage orange or catalpa trees make the most desirable fence posts for Kansas, in the opinion of Charles A. Scott, state forester.

"The Osage orange is hardier and will grow on dryer, poorer soil than the catalpa," said Professor Scott.

"The Osage orange post will undoubtedly outlast any other wooden post. Records are on file of posts that have been in use for 40 years. One objection to these posts is that they will season-check, allowing staples, driven in when the posts are green, to fall out, while the wood becomes so hard, when posts are allowed to dry, that staples cannot be driven into them.

FASTEN FENCING BY WIRE

"Fencing can best be fastened by wire to hardwood posts which refuse to hold staples. This method is especially applicable to hedge posts, which are generally rather small, and unusually hard."

For best results in growing Osage orange for fence posts, the trees should be planted in hedge rows, believes Professor Scott. The rows should be 16 to 18 feet apart, and the trees should be 15 to 18 inches apart in the row. Planting one year old plants is the most economical method. Good posts may be obtained in this way in 12 or 15 years. From these stumps sprouts grow which will produce a second crop in 8 to 10 years. These plants should be set out the last of March or the first of April.

SHOULD BE SET IN ROWS

By setting the trees in rows they may be cultivated and trimmed with ease. If they are allowed to grow with no care they form a place for the growth of weeds and are inclined to grow bushy, beside collecting trash and forming a veritable fire trap.

The catalpa speciosa is the only species of catalpa that is worth planting for fence posts, in the opinion of Professor Scott. It is a hard matter to be sure that the seedlings planted are true to name for it is impossible to tell seedlings of the different species apart.

CATALPAS NEED RICH SOIL

Trees may be propagated from seeds if care is used in selecting good seed trees. Catalpas grow best in an exceedingly rich soil, being more exacting in their demands than is the Osage orange.

Catalpa seed should be planted between April 1 and May 15. The seed must not be planted before the ground is warm and danger of frost is past.

POSTS MUST BE SEASONED

Six by six feet is the spacing generally recommended for catalpa trees. For intensive planting the spacing may be three by seven feet. Close, or fairly close, spacing develops good form, keeps out grass and weeds and does away with the necessity of cultivation. The falling leaves provide a mulch that retains moisture.

"Catalpa posts are second only to those of the Osage orange and the red cedar. It cannot be emphasized too strongly, however, that posts must be thoroughly seasoned before being set in the soil. Complaints that catalpa posts are not durable are probably due to setting the posts before they are thoroughly seasoned."

CAN HAVE EGGS AT 12 CENTS A DOZEN IN CITY

Family May Keep White Leghorns in Small Space in Back Yard—Chance to Save Money

Fresh eggs at 12 cents a dozen, even in winter, are a possibility for the city family. Here is the method given by the poultry department in the Kansas State Agricultural college for saving 23 to 38 cents on every dozen eggs:

Fence a space about 20 by 20 feet in the back yard. Construct a coop of drygoods boxes and about the first of October instal a flock of ten first class white Leghorn pullets at a cost of 75 cents to \$1 each. Keep these pullets through the winter to produce eggs and in the late spring or early summer, when the price of eggs begins to lower, sell the hens or begin to slaughter them for the table. By the first of August when the molting season has begun, the entire flock should have been disposed of, for eggs can then be purchased for less than it costs to keep the hens.

The college is in touch with several city families that have actually put into successful practice this method of reducing the high cost of living. One family has followed the plan for three years.

The grain required to feed the hens, according to figures from actual experience, is 75 pounds of wheat bran, 35 pounds of shorts, 190 pounds of cracked corn or kafir, and 150 pounds of wheat. The plan of feeding includes scattering a large handful of grain into the straw of the pen or coop in the morning. Scratching for this gives the hens needed exercise. At noon a mash of cooked table scraps and garbage is fed. In the evening a liberal feeding of grain—three large handfuls—is given. The dry bran and shorts are kept in a hopper accessible to the hens at all times.

The chicken yard may be divided into two equal inclosures. While the season permits, oats are sprouted in one inclosure to provide green stuff for the birds. When winter makes it impossible to sprout oats in the yard, this is done in the house. In August, after the hens are disposed of, the entire yard may be sown to rye, oats, or alfalfa to furnish food for the next flock and make the chicken yard fresh and sanitary.

White leghorns are the only breed of hens suitable for such treatment.

FARMERS OUGHT TO PROTECT FRIENDLY SNAKES LIKE BIRDS

Only Three Poisonous Varieties Are Found in State—Others Destroy Pests

That Kansas farmers should learn to distinguish between poisonous and harmless varieties of snakes and protect the latter as they do their bird friends, is the belief of Dr. R. K. Nabours, professor of zoölogy in the Kansas State Agricultural college.

"The black snake, the bull snake, the king snake, the hog-nose snake—spreading viper—and the garter snake are useful to the farmer and the poultryman," said Doctor Nabours. "They are the natural enemies of mice and rats, feeding upon both the young and the old of these pests. They are not poisonous.

"The bite of one of these snakes is no more dangerous than that of any domestic animal. In Kansas the copperhead and the rattlesnake are the only poisonous varieties except the cottonmouthed moceasin, which is occasionally found in the southeastern section."

VAN TRINE TO LEAD NEXT YEAR'S BASKETBALL TEAM

Salina Man Did Good Work in Season Which Just Closed

Ralph Van Trine of Salina, junior in electrical engineering, has been elected captain of the 1918 basketball team. Van Trine showed exceptional form at the close of the season this year and it was largely due to his good work in the two games with Missouri that the Aggies were able to win the Missouri valley championship.

The entire squad this season will receive basketball sweaters. Frank Reynolds, J. H. Cushman, and R. I. MacMillan are seniors and will receive their last letter. Captain-elect Van Trine, David Wooster, and Eddie Wells are juniors and have one more year to play, while D. M. Fullington, J. A. Clark, William Knostman, and Kurt Kecker are sophomores and are eligible for two more seasons.

It is customary to give the members of championship teams watch charms in honor of their achievement. Gold basketballs have been chosen by the Aggie champions.

WHERE OILED ROADS PAY

BETTER ON SAND THAN ON CLAY OR LOAM SOILS

Are Not Permanent Improvement but Are Preferable to Ordinary Earth Highways—Oil Sometimes More Satisfactory Than Water on Streets

Oiled earth roads should not be regarded as a permanent improvement but are much better than common earth roads, in the opinion of W. S. Gearhart, professor of highway engineering.

"Oiled roads do not require so much dragging as ordinary earth roads," said Professor Gearhart. "They shed water better and do not become so dusty. Although oiled roads are not so satisfactory as gravel roads, they may be a help in developing good roads sentiment."

WHEN TO APPLY OIL

The best results from oiling are to be obtained by applying the oil when the road is hard, smooth, dustless, and without any ruts or pockets, according to Professor Gearhart.

Where there is a pocket in the road, water will gather after every storm. Oil works better on sandy soils than on clay or heavy loams. Loam soils may be helped by sprinkling a light coating of sand over the oiled surface.

For the first application, half a gallon of oil containing from 40 to 60 per cent asphalt is sufficient for each square yard of road surface. Usually a strip 16 feet wide is oiled, and at the rate of three cents a square yard—all expenses included—it will cost a little more than \$250 a mile.

TREATMENT IN LATER YEARS

After the first year it is better to apply from one-quarter to one-third of a gallon of oil to each square yard of surface in the spring and the same amount again in the fall.

For laying the dust on city streets, oiling may be as economical and more satisfactory than water, particularly if the soil is sandy. When city streets are oiled it is best to cover the cross walks with dust or dirt so that they will not be covered with oil. When the oiling process is finished the dust or dirt may be swept away. Surface oiled streets are not satisfactory if the soil is clay or loam, for the oily dust blows about and is carried into buildings and upon walks.

ARMY CUTWORMS LIABLE TO INVADE THE FIELDS

This Is Time of Year When They Appear—Poison Bran Mash Will Stop Their Advance

Kansas farmers should be on the lookout for army cutworms. This is the time of year when they are likely to appear in the fields.

Owing to the presence of but little volunteer wheat last fall, the worms probably hibernated in greatest numbers in alfalfa sod and some damage may occur to alfalfa this spring, believes T. H. Parks, specialist in entomology, division of extension, Kansas State Agricultural college.

In grain the injury is usually first noticed along one edge or at one corner of the field and gradually extends across the field as the worms travel in search of new food. Where such a condition exists it is necessary to apply a bran mash to only a portion of the field. It is usually scattered thinly over the ground and is more effective if applied during the afternoon, as the worms begin feeding about 4 o'clock, and continue to feed during the night provided the temperature is sufficiently high. They remain quiet beneath the surface during the day.

The poison bran mash commonly used to kill grasshoppers is the best ammunition to use in defending the crops against the army cutworm, Mr. Parks pointed out.

The formula for the bran mash commonly used is 20 pounds of bran, one pound of Paris green or white arsenic, two quarts of molasses, three oranges or lemons, and three gallons of water.

TO CHANGE SPRAY PLANS

FRUIT GROWERS WILL MAKE ALTERATIONS IN ANNUAL SCHEDULE

Apple Scab and Late Brood of Codling Moth New Conditions in Kansas Orchards—Effective System Detailed by Prof. F. S. Merrill

Fruit growers who wish the best results from their spraying this year must make some changes in the schedule of sprays and the materials used, according to F. S. Merrill, assistant professor of horticulture in the Kansas State Agricultural college.

"Due to the unsatisfactory results of spraying during the season of 1916 unusual interest is being taken in the proper methods to follow in order to procure better results," said Mr. Merrill. "This is true of fruit growers who used the schedule of sprays used for several seasons with good results as well as those who have done no spraying. The unsatisfactory results in the case where the regular sprays were applied was due to the presence of two new conditions, the apple scab and a late brood of codling moth, which appeared when the fruit was nearly matured."

FIVE TO SIX SPRAYS

A spraying schedule that should meet the conditions in most parts of the state this season is given by Professor Merrill.

1. The cluster cup spray, to be applied when the blossom buds are just beginning to show pink. This spray should be composed of 3-4-50 bordeaux mixture to which has been added two pounds of arsenate of lead. This is a most efficient spray for controlling scab and curculio.

2. The petal fall spray should be applied when two-thirds of the petals have fallen and should be composed of 1½ gallons of concentrated lime sulphur and two pounds of arsenate of lead. This is the most valuable spray for controlling the codling moth. Particular care should be taken to force the spray into the calyx cup of the apple.

TO CONTROL APPLE BLOTCH

3. The blotch spray should be applied 14 to 18 days after the petal fall spray. This spray should be composed of 3-4-50 bordeaux and two pounds of arsenate of lead. This is the most effective spray for controlling the apple blotch.

4. The fourth spray should be applied two or three weeks after the blotch spray and should be composed of the same material as the blotch spray. It should be applied to trees that are particularly susceptible to blotch or to orchards that have been seriously affected with this disease for several years.

5. The second brood codling moth spray should be applied eight or 10 weeks after the petal fall spray. It should be composed of 3-4-50 bordeaux mixture and two pounds of arsenate of lead.

WHEN ANOTHER IS NEEDED

The application of a sixth spray may be necessary, under conditions such as were present last year, in order to control a late brood of codling moth. It should be composed of two pounds of arsenate of lead to 50 gallons of water.

For the blotch spray extremely careful work is stated by Mr. Merrill to be necessary, both in mixing the materials and in applying them. Homemade bordeaux mixture is much to be preferred. For this purpose high grade stone lime and copper sulphate are used at the rate of three pounds of copper sulphate and four pounds of lime to fifty gallons of water.

The lime should be carefully slaked to avoid burning. The use of either hydrated lime or air slaked lime will produce a material of low effectiveness and one that is apt to burn the fruit and foliage.

MIX SOLUTIONS SEPARATELY

These materials should be first prepared in stock solutions—each solution mixed separately—at the rate of two pounds of the material to one gallon of water. The copper sulphate

should be suspended in a sack near the top of a barrel of water and left long enough to become completely dissolved.

In combining these materials a tower is of great value, since the dilute material must be run into the spray tank at the same time. For this purpose two separate tanks are used, the combined capacity of which would be greater than the capacity of the spray tank. One of these should contain the lime; the other, the copper sulphate. The two dilute solutions should be run into the spray tank through separate discharge pipes.

SPRAY SHOULD BE AS MIST

"As the spray is run into the spraying tank," commented Mr. Merrill, "it should be strained to take out all coarse material which might clog the nozzle of the machine. In applying the material the spray should appear as mist. The applications should be thorough but should never be carried to the point where the material begins to drop from the twigs and foliage. Such heavy applications are often followed by severe burning of the fruit and leaves."

"If the application has been properly made the fruit, foliage and young twigs should be almost completely covered by fine drops which on drying adhere closely to the plant tissues. The material put on in this way will furnish efficient protection against the blotch spores and will not injure the tree."

FOUR NEW LIGHTS NOW HELP ILLUMINATE COLLEGE CAMPUS

Are Near Nichols Gymnasium, Auditorium, and Kedzie Hall

The illumination of the college campus has been improved by the addition of four large electric lights. Two of these lights have been placed on Nichols gymnasium at the east and west entrances. Another is on the northeast corner of Kedzie hall and the fourth on the west side of the auditorium.

BOYS WILL LEARN TO COOK AS WELL AS CARVE DUCKS

They'll Wear Butchers' Aprons—Not Mackintoshes—for the Course

"Safety first" will be the slogan of the young men in the Kansas State Agricultural college who are planning to study cookery in the spring term.

The boys not only will learn how to carve the duck without personal embarrassment or disastrous results, but will be taught how to cook and serve meals, and the art of washing dishes. Balanced menus and economy in diet will be given special attention. Marketing and the care of foods will also be included in the course.

The class will recite twice a week and will be taught by Miss Helen Green, instructor in domestic science. The boys will be required to wear white butchers' aprons while they are in the laboratory. The class will be limited to 20 members.

MOSER TAKES SECOND PLACE IN INTERCOLLEGIATE EVENT

Journalism Student Ranks High with Oration in Annual Peace Contest

Leo C. Moser of Courtland, senior in industrial journalism, won second prize in the state peace oratorical contest held at Fairmount college, Wichita. He was the representative of Kansas State Agricultural college. The title of his oration was "Economic Necessity—a Cause for War."

Mr. Moser won first place in the intersociety oratorical contest held at the college in 1916. He is a member of the Athenian Literary society; the Forum, the honorary debating society; and Alpha Tau, the honorary public speakers' fraternity.

Paul Breese of Fairmount college won first prize in the state peace contest. The institutions which took part in the contest were Washburn college, Fairmount college, Ottawa university, Kansas State Agricultural college, Salina Wesleyan university, Pittsburg Normal school, and Hays Normal school.

KEEP BAD FLAVORS OUT

PEOPLE DON'T WANT DAIRY PRODUCTS TO TASTE OF WEEDS

Cows Should Be Kept Out of Patches That Will Make Milk Undesirable—Well Ventilated Room Necessary for Separators

Don't have your dairy products taste of weeds or grass, if you can avoid it. Because butter fat absorbs flavors, particular care should be taken in handling milk, cream, and butter, according to N. E. Olson, instructor in dairy husbandry in the Kansas State Agricultural college.

"The principal flavors derived from feeds are the weedy flavors," said Mr. Olson. "In the spring creameries have trouble with the wild onion flavor. This is something that the farmer cannot prevent, and is caused by early pasturing, especially in the southern part of the state."

FENCE OFF WEEDY PLACES

"Another common flavor is the half-grass flavor, produced from green feed in the early spring. It can be tasted in milk, cream, and also in ice cream. It is found in practically all dairy products in the spring."

The method of preventing these flavors is keeping the cows from eating weeds, pointed out Mr. Olson. Weedy patches in pastures should be fenced off so that the cows cannot get to them.

FEED SILAGE AFTER MILKING

Other flavors are produced through the feeding of alfalfa and silage. If silage is fed it is advisable to feed it after milking rather than before. Flavors are absorbed from strong smelling feeds in the barn if the milk is allowed to stand where it is exposed to these odors. Ill smelling barns, gasoline, and kerosene are likely to impart their odors to the milk.

When separators are run by gas engine power, one should have a well ventilated room to keep the gas odors from giving the milk an offensive taste. Metallic flavors are caused by rusty cans, and cans which are not in good condition should never be used. These flavors may be partly removed by pasteurization and aeration.

COOL CREAM AT ONCE

The separator should be cleaned thoroughly and scalded after it is used. The cream should be cooled immediately so as to prevent the growth of organisms which may produce cheesy or yeast flavors. Warm cream should never be mixed with cold cream previously separated.

The cows should be cleansed before milking. A small top pail is preferable, in the opinion of Mr. Olson. Strainer cloths, if used, should be washed, and after each milking should be scalded and hung in a clean, well ventilated place to dry. They should never be used in the evening and be allowed to hang in the barn over night, then used the next morning. Such methods will cause bacteria to grow on the cloth. This will do more harm than if the milk were not strained at all.

Sour cream will test the same as sweet cream. The farmer should deliver his cream in the best possible condition. More money is paid for first grade cream, so that it is to the farmer's advantage to produce good cream.

PREVENT PEACH CURL, DON'T TRY TO CURE IT

Disease Thrives in Cold, Wet April and May Weather—Lowers Vitality of Trees

Prevent peach curl. Do not attempt to cure the disease after it has once started, advises L. E. Melchers, instructor in plant pathology in the agricultural college.

The symptoms of peach leaf curl are the warping or curling of the leaves, causing a distortion and increase in thickness, pointed out Mr. Melchers. The color of leaves that have been attacked is at first a reddish brown and later white or yellowish white.

In severe cases the foliage may fall from the tree entirely on account of the disease. The most favorable climatic conditions are cold, wet weather during April and May. It is at this time that the organisms make the greatest growth if conditions are favorable.

Peach curl does not affect the fruit in Kansas. It is advisable to spray the trees each season. The disease ought to be kept out of the orchard, for otherwise the vitality of the trees becomes lower each year from its attack. The disease is caused by a fungus which does not attack any other tree than the peach.

A remedy for the prevention of this disease consists of spraying the trees with dormant lime sulphur, the same as used for San José scale. In using this spray it not only controls the peach leaf curl but also prevents further depredations of any scale that may be present.

It is important that this spray be given before the buds begin to open, since the spores of the fungus lodge between the scales of the buds and on the twigs. Since the fungus occurs in these places it can easily penetrate the leaf tissues as soon as the buds begin to open.

ADVOCATES INDOOR PLANTING OF CANNAS EARLY IN APRIL

Prof. M. F. Ahearn Shows Advantages of New Plan for Starting Plants

Cannas should be started indoors the first or second week in April and transplanted the second week in May. This plan has numerous advantages over the old method of planting the bulbs directly in the beds in which they are to grow, believes M. F. Ahearn, professor of landscape gardening in the Kansas State Agricultural college.

By the new method it is possible for the grower to select plants of uniform size and color. There is less danger from frost when the plants are not set out until May.

The indoor plan is simple. The bulbs are cut in lengths varying from two to four inches. Individual specimens are placed in pots or several may be planted in a shallow box. The pots or boxes should be put in sunny basement windows, under greenhouse benches, in hotbeds, or in cold frames. Strong, well developed plants are produced that will stand the strain of transplanting.

UNIFORM SIZE AND SHAPE IN EGGS FOR INCUBATION

Smooth Shells, All White or Brown, Are Also Desirable

Eggs for incubation, either natural or artificial, should be uniform in size, with smooth shells of good texture, according to N. L. Harris, superintendent of the Kansas State Agricultural college poultry farm.

Irregular shaped eggs will hatch nearly as well as smooth shelled eggs, believes Mr. Harris. It is not considered good practice, however, to set the irregularly shaped eggs as there is a possibility that pullets hatched from them will inherit the undesirable characteristic of producing poorly shaped eggs.

As a rule it is not wise to place both white and brown eggs in the same incubator, as the white eggs have a tendency to hatch one or two days sooner than those with brown shells. There is nothing in the color of the shell which affects the time of hatching, but the small, quick maturing birds nearly all lay white shelled eggs. The embryo chicks of these breeds will develop more rapidly than those of the heavier breeds.

Eggs that vary greatly in size should never be set in an incubator as the large eggs seem to receive more heat due to projecting higher in the machine than the smaller ones. Eggs with shells of poor texture which appear porous, allow the moisture to evaporate too readily and seldom, if ever, hatch.

There is absolutely no way of determining the fertility of an egg previous to incubation, nor is there anything in the shape of the egg which will indicate the sex of the chick.

DOES THE FARMER READ?

MORE THAN EVER BEFORE, ANSWERS SECRETARY OF AGRICULTURE

Prejudice Against Literature Largely Overcome, Believes J. C. Mohler—Writer Must Be Accurate, Non-technical, and Appreciative

The Kansas farmer is reading more than ever before, in the belief of J. C. Mohler, secretary of the state board of agriculture. Mr. Mohler addressed the students in industrial journalism on "The Farmer and Agricultural Literature."

Mr. Mohler, who has done extensive writing on agricultural topics, emphasized the importance of accuracy and of not underestimating the farmer's intelligence.

FARMER IS DISCRIMINATING

"There is no doubt," said the speaker, "that the farmer has largely overcome his old time prejudice against agricultural literature. It is equally true that he is a discriminating reader and by no means accepts as gospel everything that bears the label of farm literature. The power of farm literature depends on the character of that literature. Ably written and edited; dealing with facts, not fiction; with concrete experiences, not glittering generalities, the printed page is a mighty factor for better farming, better homes, greater comforts, and for procuring that broader culture of life which humanity craves."

"Among the more progressive farmers the reading habit is rapidly developing. It is no exaggeration to say that demands on the board of agriculture for information about farming and rural improvement have increased 50 per cent in the past five years. Plainly, the reason farmers are taking more interest in farm literature is that they are finding it valuable in their operations."

BOUNDLESS CHANCES FOR SERVICE

"The amount of good that may come through the dissemination of high-class literature adapted to the needs of the husbandmen is unlimited, and in this field there are boundless opportunities for real, genuine service, worthy of the most cultured minds and of broadest intellects."

"Farmers realize that life is too short to learn everything by first hand experience, and they are looking to every available source of information for ideas and suggestions that will help them in their business. Several forces are at work to meet this need. The experiment stations are circulating much valuable literature in the form of bulletins. Helpful publications are issued by national and state agricultural departments, and by commercial printing plants. The agricultural press has greatly widened its sphere of usefulness."

WANTS OTHERS' EXPERIENCES

"The printed page is perhaps the greatest single agency for the diffusion of agricultural knowledge. It is highly important, therefore, that what is thus conveyed be absolutely reliable. Not only that, but it must be written in a plain, understandable way, avoiding technical language and the temptation to 'fine writing.'"

"The farmer places great store in the experience of others who have made conspicuous successes. As a general thing he scouts 'theory'; he wants literature that tells how it was done, rather than literature telling how it should be done. In other words, he wants accounts of experiences and practices rather than preachments that tell of his shortcomings and faults."

"Writers should be careful not to underestimate the intellect of the farmer. They should realize that the men on the farm are the kin of our modern captains of industry, and as a class are of the same mold and have mental powers just as great as the dwellers of the city. It is an offense to the intelligence of the farmer to write 'down' to him. He is an equal and possibly in some ways a superior. To succeed in the field of agricultural literature, be accurate, be sure of your facts, be sincere, be truthful, and do not overdraw."

THE KANSAS INDUSTRIALIST

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Kansas State Agricultural College, Manhattan, Wednesday, March 28, 1917

Number 24

BOYS AND GIRLS FARM

THOUSANDS WILL HELP OVERCOME PRESENT FOOD SHORTAGE

Many Kansas Children Will Be Enabled to Start Savings Accounts Through Gardening, Says Specialist in College Extension

Thousands of Kansas boys and girls will farm on a small scale in Kansas this year. Many of them will be enabled to start savings accounts. They will assist in overcoming the present food shortage. Boys' and girls' club work will be pushed by the division of extension of the agricultural college.

That there is money in gardening was proved by the contestants in the state contests last year under the leadership of Otis E. Hall of the college. The winner in the square rod contest reported a profit of \$20.35. An acre cared for as efficiently would have netted \$3,256. The winner in the tomato club contest received a profit of \$87.65 from a one-tenth acre plot.

EVERY CHILD SHOULD HAVE CHANCE

No boy or girl in town or country should be denied the privilege of growing a garden, believes L. C. Williams of the division of extension. The size is not important. A square rod or less may be used to advantage. In no case should the plot be so large that it will prove burdensome to the gardener. The garden may easily be made an important part of a boy's or girl's education. The care of the soil and its products in an intelligent manner serves to correlate the work of the school with that of the home. It gives the gardener a sense of responsibility and teaches him the rewards of industry and the value of money.

"When it is realized that the tomatoes contained in a can costing 15 cents at the corner grocery were obtained for 3 cents or less by the packer," commented Mr. Williams, "it is clear that a great saving may be made by learning how to put the surplus tomatoes on the table or market in their finished state as did the champion tomato club girl for Kansas last year."

SHOULD BE STARTED EARLY

Gardens should be started early. The first products are the most appetizing and bring the highest price on the market. The first home grown tomatoes usually bring 10 cents or 12 cents a pound while the later ones must often be sold for 2 cents. Early potatoes in average years sell for more than twice as much as the later ones.

Well drained ground should be selected for the garden when possible. In case there is no choice, whatever soil is available should be used. This can be made to produce satisfactorily by proper management. A moderate application of well rotted manure followed by deep plowing or spading will improve the condition of the ground selected.

A garden plan is important. It should be drawn to scale on a large sheet of paper. Each row should be marked, and the amount of seed necessary for each vegetable should be ordered from a reliable seed house.

KANSAS LEADERS IN CLUB PROJECTS TO MEET HERE

Scope of Work Will Be Greatly Increased in View of Present Food Shortage—5,000 Members Last Year

Leaders in the state garden and other club projects in Kansas representing the division of extension of the Kansas State Agricultural college and the United States department of agriculture will meet in conference at the college March 29 to 31.

Five thousand boys and girls were engaged in club work last year, but as a result of the increased interest in gardening this season due to the present food shortage, and the recent appointment by the board of administration of additional leaders, the scope of the work will be increased materially.

The list of conference speakers includes Otis E. Hall, state club leader; Edward C. Johnson, dean, division of extension; H. L. Popenoe, county agricultural agent, Emporia; Mrs. J. M. Timmons, Bonner Springs; Miss Bertha McCabe, county superintendent, Lyons; Miss Frances L. Brown, director of home economics, division of extension; Miss Lottie Milam, assistant state club leader; Mrs. Mary Pierce Van Zile, dean, division of home economics; Carl P. Thompson, specialist in animal husbandry, division of extension; L. E. Call, professor of agronomy, Fred S. Merrill, assistant professor of horticulture; M. F. Ahearn, professor of landscape gardening; Dr. J. H. Merrill, assistant professor of entomology; H. Umberger, assistant supervisor of demonstrations, division of extension; Charles A. Boyle, Emporia; Thomas Cahill, Leavenworth; Miss Elizabeth Spencer, county superintendent, Yates Center; George E. Bray, industrial engineer, division of extension.

WELL PREPARED SOIL THE FIRST STEP TOWARD LAWN

Seed Will Give Satisfaction in Most Cases Says Landscape Gardener—Sod Needed for Some Places

Thorough preparation of the soil is the first requisite in building a lawn, points out M. F. Ahearn, professor of landscape gardening in the Kansas State Agricultural college. Plow deep, and disk and harrow the soil until it becomes finely pulverized.

"Seed is used oftener than turf in making a new lawn because it is cheaper," said Professor Ahearn.

"Sod may be laid at any time. It brings quicker results than seed, but requires constant watering the first season. Use sod for planting narrow strips, borders, and terraces. In all other cases seed will give satisfaction. Thick sowing will be most satisfactory as it prevents the growth of weeds and other grasses.

"Watch for the first appearance of weeds in the lawn and destroy them immediately. The only way to get dandelion out is to remove the roots."

Kentucky blue grass is the best grass to plant, in the opinion of Professor Ahearn. It thrives in almost any soil and does well in this part of the state. Keep the front of the lawn clear of shrubs. Plant only in the corners, at the sides and back. A flower bed has no place in a small lawn. The lawn should be planned before the house is decided upon. Many lawns are spoiled by carelessness or ignorance in placing the house.

WOMEN AT HOLYROOD SCHOOL ORGANIZE PERMANENT CLUB

Extension Event Will Be Made Annual Affair—Speakers on Home Economics

One of the best extension schools for women ever held in the state has just closed at Holyrood.

The women in attendance organized a permanent club and are planning to make the school an annual event. Representatives of the home economics department of the extension division of the Kansas State Agricultural college were the speakers.

Western Farm Life prints in its current issue an address entitled "Farm Tenancy is Disastrous to Rural Progress," delivered at the Colorado Agricultural college by Dr. W. M. Jardine, dean of agriculture in the Kansas State Agricultural college.

FUTURE FOR PUREBREDS

MAJORITY OF ALL BREEDERS NOW USE SIRES OF THIS CLASS

Outlook Is Exceedingly Favorable, Says Edward N. Wentworth—Number of First Class Live Stock Can Be Largely Increased with Profit

A bright future for purebred live stock is predicted by Edward N. Wentworth, professor of animal breeding in the Kansas State Agricultural college.

"The use of grade sires is gradually decreasing," said Professor Wentworth. "Seventy per cent of the horse breeders, 65 per cent of the sheep breeders, 60 per cent of the cattle breeders, and 50 per cent of the swine breeders use purebred sires.

GIVES PRESENT PROPORTIONS

"From 8 to 10 per cent of the hogs are purebred, approximately 2 1/2 per cent each of beef and dairy cattle, 2 per cent of draft horses, 3 per cent of light horses, and from 1 1/2 to 2 per cent of sheep.

"These proportions may be those actually required to furnish the bulk of breeders with purebred sires, although it is probable that there should be from 6 to 8 per cent of purebreds in order to supply one purebred for every 30 grade females, to maintain purebred herds, and to permit a rigid selection of breeding animals.

ALL WILL USE PUREBREDS

"The present proportion of purebreds seems to be sufficient in order to supply the present users of purebreds, but not so rigid a selection can be practiced as might be desired. The fact that probably all breeders will ultimately use purebred sires, will allow a doubling in the percentage of purebred cattle, an increase of two-thirds in the number of hogs, slightly more than one-half in sheep, and one-third in the number of horses, without increasing the severity of selection.

"Such an expansion will afford a prosperous future for purebred live stock even though the standards of selection are not raised. Since, however, standards of selection are being continually raised, an even higher percentage of purebreds may be expected."

GOPHER, THOUGH STUPID, IS A SERIOUS CROP PEST

Animals Multiply Fast in Alfalfa Fields—May Be Poisoned Easily or Caught in Steel Traps

The pocket gopher does more injury to Kansas crops than any other mammal. Exterminate it by using poisoned potatoes or apples or by trapping, advises Dr. Lee R. Dice, instructor in zoölogy in the Kansas State Agricultural college.

"Alfalfa fields furnish almost ideal conditions for the development and multiplication of gophers as their burrows are not broken up by plowing and the root system provides an abundance of food," said Doctor Dice.

"Gophers are stupid animals and will blunder into almost any trap that is properly set, and they can be poisoned easily at little cost and labor.

"The natural food of gophers consists of roots and seeds and succulent vegetation drawn down from the surface. Hence a substitute of poisoned potato, sweet potato, or apple can be used effectively. A few grains of strychnine inserted by means of the tip of a pen knife into such food placed in the burrows will serve the purpose. A sharp stick can be used to open the tunnel. The agricultural college supplies at cost a prepared poison for gopher extermination."

Trapping is effective, steel traps set in tunnels being recommended.

The light should be excluded by a board, which will also serve to keep the opening free from dirt. If this is not done the gopher will come with a load of dirt to fill up the hole. Other traps are on the market.

Besides destroying the root systems the gopher covers much vegetation with mounds of soil. This often hinders harvesting as well as covers the grain.

TAKE CARE OF PIGS IF YOU EXPECT ANY PROFIT

Ration, Sunshine, and Exercise All Have Effect in Keeping Animals Up to Proper Standard

That the care and management of young pigs is an important factor in making a profit from them, is the belief of Ray Gatewood, instructor in animal husbandry in the Kansas State Agricultural college.

"A sow should receive special care and attention at farrowing time," said Mr. Gatewood. "Just after she has farrowed, feed her lightly for a few days. Gradually increase the feed as the pigs develop.

"The ration at this time should be such as to produce a heavy flow of milk. A good ration is one made up of corn, shorts, bran, a small amount of tankage, and a good quality of alfalfa, which should be fed from a rack. Bran may make up approximately 10 per cent of the ration as it seems to have a beneficial effect on the digestive system and tends to increase the milk production.

"The amount of feed given a sow may be governed largely by her appetite. Tankage should not be fed to exceed 5 per cent. Corn may make up half the ration as it tends to prevent sows from becoming exceedingly thin.

"See also that she and her little ones are provided with clean, comfortable quarters. Direct sunshine is important in sleeping quarters. Exercise is another requirement in maintaining a perfect physical condition.

"Pigs should be watched closely for sore mouths, especially in large litters. It is sometimes advisable to clip the tusks from the pigs, thus preventing them from scratching each other. In case of sore mouth, wash the part frequently and thoroughly with some disinfectant. Vaseline, containing a small amount of a stock dip, makes a desirable ointment to apply after the nose has been washed."

FERTILIZERS DON'T COUNT IN KANSAS FRUIT GROWING

Are Necessary in Only a Few Places, Points Out Horticulturist

The application of fertilizers is one of the least important factors in fruit growing in Kansas, in the opinion of F. S. Merrill, assistant professor of horticulture in the Kansas State Agricultural college.

"Some soils in the state are so extremely fertile that orchards planted on them have a tendency to make an excessive wood growth," said Mr. Merrill. "This abnormal growth of wood tends to cut down the size of the fruit crop. On such fertile soil the use of fertilizers is a detriment.

"In a sandy soil where clean cultivation is practiced there may be a lack of humus and organic matter. On such soil it is well to use a fertilizer.

"Except for young peach trees, barnyard manure is the only fertilizer that need be used. It is rich in organic matter and supplies the soil with all the material that is needed for orchard fertilization. The manure should be applied in the fall and winter at the rate of 12 to 15 tons an acre. In the spring the manure should be disked into the ground."

MORE POTATOES IN WEST

DEAN JARDINE LOOKS FOR BIG INCREASE IN ACREAGE

Every Farmer in That Part of State Should Plant Some, Advises Agriculturist—Early Maturing Varieties Should Be Grown

That the number of acres planted to potatoes in the western half of the state will be increased materially this season, is the belief of Dr. W. M. Jardine, director of the Kansas Agricultural Experiment station. Doctor Jardine urges every farmer in that territory to plant at least a half acre of potatoes.

Experiments have proved that it is possible to grow potatoes profitably in areas of limited rainfall. Potatoes have been grown for the last five years at the Fort Hays branch station. Last year early Ohio potatoes planted in April yielded, with irrigation, an average of 74.8 bushels an acre.

JARDINE CONDUCTED EXPERIMENTS

Earlier experiments conducted by Doctor Jardine in 1908 and 1909, when he was connected with the United States department of agriculture, were valuable in determining the best varieties to plant and the proper methods of handling potatoes under dry land conditions. These experiments were carried on at points in North and South Dakota, Montana, Colorado, and Utah.

Petoskey, Irish cobbler, and early Ohio proved to be the best varieties for planting, not because they were the highest yielders but because they matured early—the chief requirement under dry land conditions. These varieties yielded as an average at Akron, Col., for the years 1908 and 1909, and under a rainfall of 16 and 20 inches respectively, 225, 202, and 186 bushels, of which amounts four-fifths were marketable. Almost equally large yields were obtained at Williston and Dickinson, N. D. These yields were considerably higher than can be expected on an average, although the seasons were not above normal.

WHEN AND HOW TO PLANT

It was found that potatoes planted in rows three feet apart—hills 18 to 24 inches apart in the rows—gave best results. Medium to large tubers, whole or sectioned, produced larger yields and more marketable tubers than medium to small tubers, whole or sectioned.

"In the western half of the state potatoes should be planted in the last week in March, but the middle of April is not too late for good results," said Dean Jardine. "As with other crops, a good seed bed should be prepared and land that has been plowed early should be used. The crop should be well cultivated. Arrangements should be made to combat the common insect pests and diseases affecting potatoes. Probably the greatest danger lies in the Colorado potato beetle. The most effective method of controlling this insect is by spraying the vines with poison.

SPRAYING SHOULD START EARLY

"Spraying should begin as early as necessary to prevent injury to the plants and should be repeated as often as necessary to keep the vines covered with poison. For this insect alone, two or three sprayings, perhaps more will be required, but by combining the poison with Bordeaux mixture, both fungus and insect pests are controlled without making separate applications necessary."

A bulletin of the Kansas Agricultural Experiment station—number 194—gives detailed information on potato growing, spraying materials, and spraying machinery.

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J. D. WALTERS.....Local Editor
ADA RICE, '95, M. S. '12.....Alumni Editor

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WEDNESDAY, MARCH 28, 1917

THE WHY OF SUMMER STUDY

Schools used to close up tight in summer because children and youths were needed at home. As the need for their services grew less, the excuse was invented that summer was no time to do mental work, that it was a period of low mental efficiency, and that the schools should be closed for that reason.

Science has now crossed this excuse off the books. It has shown that mental efficiency is at its lowest in February and that it is reasonably high in summer. Persons can study in midsummer better than in mid-winter.

There is no reason, therefore, why one shouldn't get a lot of good out of the summer session of a college if one attends it. And in many lines of work business is slack in summer so that it is an easy matter to go to college—an easier matter than at other seasons of the year. The college summer term is a real opportunity.

TEST YOUR SEED—IT MEANS MONEY

There is no other agricultural operation which is so simple and at the same time yields such large returns as the testing of seed. The seed test may at any time mean the difference between a 90 per cent crop and a 10 per cent crop.

The first step in insuring good seed is selection. Seed should ordinarily be obtained from the region in which it is to be planted. It should be chosen from plants which are thrifty but which have grown under normal conditions. It should itself present the best characteristics of its variety.

Selection of seed, however, is not enough. One can't tell the vitality of seed simply by looking at it. Too many factors affect the quality to enable any one to make sure of it without a test. And the tests for the various seeds are so simple and so readily performed that no farmer can have reason to neglect them. Especially after seasons when crops failed to mature properly in many places, as was the case with corn in 1917, is the test of pressing importance.

The world needs big 1918 crops. To test the seed planted in Kansas is one of the contributions that the state may make to the fulfillment of this need.

A GOOD INVESTMENT

The discovery of America cost a little more than \$7,000, according to documents found in the archives of Genoa. These documents record the value of Columbus' first fleet at \$3,000. Columbus himself was paid a salary of \$300 a year, and his two captains \$200, while the members of the crew were each paid at the rate of \$2.50 a month. It was a great investment fully justifying the expenditure.—East St. Louis (Ill.) Journal.

THE COUNTRY WEEKLY

A good country weekly that makes its news, editorials, and advertisements interesting and helpful to the members of the community in which it is published, will have no difficulty in making its influence felt and in succeeding financially. A paper that appeals to every member of every family will never lack subscribers.

The country publisher's first task is to analyze his circulation to determine what proportion of his subscribers live in town and what proportion in the country. Then he should give each class of readers a proportionate amount of news of primary interest to them. It is easy to forget the half or two thirds that live on farms and to edit a paper primarily for the one half or one third that live in the town.—Willard G. Bleyer.

THE ROYAL ROAD

Along Life's Royal Road every traveler is a child of God; every path and bypath is beset with blessings that are free. There are pleasant words, beautiful thoughts, smiles, pure air, wild flowers, sunsets, roses; yes, the beauty of the great outdoors. There is duty, bitter betimes in the doing, but sweet as honey when done. There is companionship that gives faith, encouragement, inspiration and hope, love that gives armour for the fiercest battle, tenderness and succor for the deepest sorrow, peace and joy for pure living. And there are bird song and brook song and the silent song that wells in the contented heart. All these are scattered along the Royal Road for those who travel with thoughts high, heart bold, feet shod with righteousness, faith in the fellow travelers, and with a vision that looks down the vista which wends its way to Peace and Rest. The Royal Road leads far and wide, over many a hill, down many a dale to the Eternal City of Joy at last.—Ada M. Kassimer in the Crafters' Magazine.

EDWARD T. FAIRCHILD

The passing of Edward T. Fairchild, president of New Hampshire college and former state superintendent of public instruction of Kansas, at his home in Durham, New Hampshire, on January 23, 1917, brought to the school people of Kansas more than a passing regret. Although Mr. Fairchild's early life was spent in Ohio, and his last years were in New England, he was essentially a Kansan in thought, in viewpoint, and in character. For nearly 30 years his life was identified with the schools of the state, and as state superintendent he left a marked influence upon the school interests of Kansas that will be felt for many years.

So the memory of Mr. Fairchild belongs to Kansas rather than to Ohio or New Hampshire. The breadth and the sweep of Kansas prairies were his. And although his work in New Hampshire college was characterized with unusual success, he must have felt, after all, that he dwelt in an alien land. He must have missed the generous expanse of Kansas skies, the hum of the harvester in the golden wheat, and the waving green banners of the growing corn. It could not well be otherwise.

Mr. Fairchild was a man's man. He was thoroughly human. Not butter-milk, but blood flowed in his veins. Forceful, aggressive, ambitious, forward looking, he understood men, and was of their fellowship in the largest sense. He was a leader. No other state superintendent was ever so popular with the legislature as was Mr. Fairchild. He was a man first and a schoolman afterward. This was the secret of his success.

Mr. Fairchild has passed on into the Far Country but his memory lives and will live with us here in Kansas.—The Kansas Teacher.

SMALL GRAINS RETURNING?

Almost any man of middle age who spent much time in the country when a boy can well remember the days when the great majority of the farmers of New England raised their own grain—wheat, corn, oats, barley, and rye.

And this they would have ground in the local grist mills then so plenty, furnishing their families with better and more wholesome flours and meal than can possibly be obtained today.

That era passed. Now one can hardly find a small grist mill in a week's journey. Farmers have abandoned the raising of practically every one of the small grains—to their disadvantage, Vergie A. Sanders, special field agent of the department of agriculture for New England, believes. But he feels that a change is coming.

"Until quite recently," Mr. Sanders says, "it was good judgment to buy

The Big Sister movement is as broad as sistership itself. All a member has to base her conduct on is her ideal of how she would look after a younger sister of her own. In some families there is always somebody just a little younger. So it is in the store, the factory, the office, everywhere that women are employed—there is always somebody just a little younger, just a little weaker, just a little lonelier, just a little more in need of some kind of a little lift. Therefore there is a place for the Big Sister, even though she may not be so very big.—Kansas City Star.

The Suppression of News

The Editor and Publisher

Few people would have the hardihood to ask a judge to have a grand jury indictment pigeon-holed, or secretly dismissed, as a personal favor, with the object of saving the accused person from public humiliation. Yet there are still people to ask editors to suppress news—or to color it to the advantage of those figuring in it.

If the people generally could understand that the newspapers are quite as important factors in our lives as the courts—that the responsibility of an editor to the public is fully as sacred as that of the judge—there would be little effort made to have legitimate news suppressed.

To ask a judge to exercise bias is to commit "contempt of court." To ask an editor to suppress the truth about actual events is to commit contempt of public opinion.

The newspaper which would suppress real news in the interest of the individual would betray its trust, violate the obligation to society which it solemnly assumed on the day of its birth, and would thereby forfeit its place as the guardian of public interests, and would become a menace, rather than a factor of useful service, to its community.

To suppress the news of a court proceeding, with the mistaken purpose of protecting the good name of an individual, would be to imply that our court proceedings are invasions of the rights of those who are under accusation—that for the protection of those rights a newspaper must draw the veil of silence over the event.

The surest safeguard against judicial tyranny is full publicity of court proceedings, whenever these have a public interest. The best safeguard against injustice to the individual is the publication of the truth about any event in which he figures. When, because of personal considerations, an editor fails to do this, he breaks faith with his public.

The editor is the historian of his day. He must record history as it is made, in both large and small things. It always happens that some of this history will be humiliating, shameful—that in the printing of the news of the day some people will be pilloried. It is to be regretted that the events happened—but the historian must put them into the record.

Western grain and raise commodities which could not stand a long haul. But the time is now here when it is profitable to grow grain in New England, and, consequently, New England will do it."

If the farmer finds that he can save money by raising his own grains, he will certainly raise them. With upward trend of prices in view, it ought to be possible for him to be his own grain dealer at a profit to himself.—Boston Post.

BIG AND LITTLE SISTERS

The Big Sister idea is strangely appealing. There is not, in the whole catalogue of human relationships, a better one than that of big sistership. The best mothers are big sisters.

The organization of Big Sisters, five hundred strong in Kansas City, is based on an age-old need. The Big Sister assumes the existence of the little sister. They are marching partners. Already, it is said, the practical value of the hand stretched out by the Big Sister to her younger working mate has been demonstrated over and over again.

"You are the first woman who has ever spoken directly to me, as one woman to another, in the three years I have been in Kansas City," said a young woman behind the counter of a Kansas City department store last week to a member of the Big Sisters. Perhaps no man, either, had spoken directly to her as brother speaks to sister. And yet how many must have spoken!

A QUARTER CENTURY AGO

Items from The Industrialist of March 26, 1892
Miss Ella S. Child, '77, is secretary of the Spear-Winans association.

Regent Moore was at the college on Tuesday to attend a meeting of the board committee on finances.

A new term begins Monday for a 10 weeks' stretch, which will be rounded up by the festivities of commencement week.

Professor Georgeson reports the herd in excellent condition, and plenty of feed on hand to keep it until the grass starts.

The manure has been hauled out and spread regularly during the winter, thus saving the great waste by leakage in the barnyard.

F. S. Little, fourth-year, who is still very sick of pleurisy, has been treated with oxygen prepared at the college laboratory.

Examinations never moved along more smoothly than they did Thursday and Friday, and grades are fully up to the average.

Regent Wheeler's paper on "General Farming," read before the Oskaloosa institute, finds a place in the Kansas Capital of this week.

Mrs. Perry Mayo of Battle Creek, Mich., visiting Doctor and Mrs. Mayo, gives a lecture today at an open meeting of the Manhattan grange.

Student editors for the spring term were elected Wednesday morning by ballot. Miss Ora Wells, C. H. Hartley, and D. H. Otis were chosen.

They were lucky girls who, by reason of their irregular course of study, enjoyed the privileges of both the second-year and third-year parties.

H. S. Willard, '90, is one of the 37 graduates of the University Medical college of Kansas City that were turned loose upon the public on Wednesday last.

About one-fourth of the students who have spent the winter term in college have gone home to begin spring work on the farm, hoping to return next year for further study.

W. S. Arbuthnot, '91, arrived at the college this morning for a few days' visit. He has just graduated from the Chicago Veterinary college, and will practice as soon as he decides upon a location.

The seeding of oats, interfered with by the rain of last night, will be resumed as soon as the ground is in condition. Thirty acres will be sown, and will, as heretofore, be under experiment.

The farm department has just acquired a new saddle pony by exchange of a Jersey heifer. The pony is large enough to work in team in case of need, thus placing three spans of horses at the command of the department.

A representative of a Kansas City publishing company visited the college this week, and left several persons under the conviction that it is an easy matter for a man to buy what he doesn't want when it is offered to him on the installment plan.

The ornithological section occupied the program of the Scientific club at its session last evening. A paper was read by Secretary Graham on "The Game Birds of the West," and by Professor Lantz on "Habits of Some of Our Native Birds." Many specimens of the feathered tribe from the museum illustrated Secretary Graham's paper.

In the public hour yesterday afternoon Professor Popenoe interested the audience in a lecture dealing with the vertebrate fauna of Kansas, showing their distribution, and describing many of the species. It was shown that by the overlapping of the eastern and western fauna districts in the state, and the near approach of the Austroriparian and Sonoran districts, Kansas was an especially favorable ground for collectors.

SUNFLOWERS

Don't leave your mouth ajar, please.

The women will soon be calling small potatoes "little darlings."

Caveman methods are the kind used by the people who get what they want.

The Kaiser's job wouldn't bring very much at a sheriff's sale nowadays.

We cooperate entirely too much by word of mouth, and entirely too little in spirit and in truth.

An excellent provider is a man whose wife doesn't mention having nothing to wear more than 17 times a day.

Every way but financially, we feel like offering a ten thousand dollar prize for a new joke about the cost of paper.

Up to the present no real estate agent has tried to sell us any town lots in the "undiscovered country from whose bourne," etc.

SIGHING STILL

John used to sigh for lovely Sue,
Sue used to sigh for John;
And now both sigh—forsooth, because
They simply can't get on.

SATISFACTION GUARANTEED

"I know now," grumbled the sour cynic, "how easily my wife may be pleased."

"How is that?"
"I simply furnish her with nothing to do and all the money she wants to do it with."

AMONG THE ALUMNI

Stanley Baker, '16, is principal of the high school at Wathena.

Mrs. Mary (Mudge) Elling, '05, is visiting her parents in Manhattan.

H. H. Amos, '16, is assistant in the chemistry department of the college.

Miss Hazel Groff, '16, is instructor in domestic science in the high school at Lansing.

Mrs. William (Brady) Anderson, '98, of Houghton, Mich., was a recent visitor in Manhattan.

Miss Faith Earnest, '16, is teaching domestic science in the high school at her home in Washington.

Mrs. Katharine (Winter) Hawks, '01, of Chanute is visiting at the home of her parents in Manhattan.

Miss Edna Hawkins, '16, who is teaching at Council Grove, visited friends in Manhattan Saturday.

Miss Louise Greenman, '16, of Kansas City, Kan., spent Saturday and Sunday with college friends here.

The work of Dr. M. F. Hulett, '93, in treating injured children is featured by the Ohio State Journal, Columbus, Ohio.

R. W. Bishoff, '97, who is in the United States Indian service, has been transferred from Chin Lee, Ariz., to Goleb, Okla.

Dick Lewallen, '13, is in agricultural extension work for the South Dakota State college. He is located at Presho, S. D.

Mrs. Clara (Newell) Brandt, '96, of Hastings, Nebr., who has been visiting her sister, Mrs. Nora (Newell) Hatch, '93, has returned to her home.

T. W. Allison, '98, and Mrs. Inez (Manchester) Allison, '98, are farming in Marion county. They have just completed a modern home.

Dan B. Brummitt, a student in 1886 and 1887, visited the college the latter part of last week. He is editor of the Epworth Herald, Chicago, Ill.

Miss Izil Polson, '14, enjoyed a visit this week from her mother, Mrs. Polson, of Fredonia, and her sister, Miss Mary Polson, '16, of Paola.

B. K. Baghdigian, '16, is on the staff of the News, Baxter Springs. Mr. Baghdigian has done recently considerable writing for farm journals also.

Dr. H. W. Bales, '09, who is doing tick eradication work for the United States bureau of animal industry, was recently transferred from York to Mobile, Ala.

Miss Marie Coons, '09, who was recently operated upon for appendicitis at the Charlotte Swift hospital in this city, is reported as getting along satisfactorily.

William F. Droge, '10, visited college friends from Saturday until Monday. He was on his way to Ossett, Mont., to establish his residence on a homestead.

C. L. Marlatt, '84, is author of a pamphlet on "The Silverfish: an Injurious Household Insect," just published by the United States department of agriculture.

Mr. B. D. Jeffs and Mrs. Bessie (Tolin) Jeffs, '08, are living at 3433 Winfield avenue, Berwyn, Ill. Mr. Jeffs is working in Chicago territory for the London Machinery company.

W. E. Watkins, '06, has resigned his work as county agent in Allen county, Kansas, and has accepted a similar position in Lake county, Ill. His headquarters are at Libertyville.

Mrs. Helen (Huse) Collins, '08, of Baldwin is visiting at the home of her parents, Mr. and Mrs. A. F. Huse of Manhattan. Mrs. Collins is a former instructor in the domestic science department.

A. B. Carnahan, '05, is in the employ of the United States ordinance department and is stationed at the Springfield armory. His home is at 202 Washington street, Lynn, Mass. He says in a letter: "I look forward to a trip west when I may visit college

hill, renew acquaintances, and vow allegiance anew to the Great School of the West."

BIRTHS

Born, to Mr. J. L. Smith, '08, and Mrs. Blanche (Robertson) Smith, '08, Coquille, Ore., on March 7, a son.

DEATHS

MRS. C. W. DEAVER

Mrs. C. W. Deaver died at Sabetha March 11 after an illness of one week. She is survived by her husband, a daughter, Miss Clara Deaver, '14, and a son, Harlan Deaver, '10. Miss Deaver has resigned her position as supervisor of home economics in the Austin (Tex.) high school to remain at home with her father and brother.

MARRIAGES

HOFER-ROSS

Miss Henrietta M. Hofer, '02, and Mr. Donald Ross, '07, were married March 10 in Westfield, N. Y., the Rev. W. I. Steans, pastor of the First Presbyterian church, officiating.

The ceremony was followed by a wedding supper, the wedding cake for which was made in Kansas by a sister of Mr. Ross. Another feature was a portion of wedding cake 45 years old, sent to Mr. Ross by a western aunt for whose wedding the cake was made.

Mrs. Ross is well known in musical and social life of Westfield. Mr. Ross is with the New York branch of the Western Electric company. Mr. and Mrs. Ross will be at home after April 15 at 124 Euclid avenue, Westfield.

TEACHING IN MEDICAL COLLEGE

In a letter Dr. Scott S. Fay, '05, writes: "Since leaving the Kansas State Agricultural college I have been graduated from the University of Nebraska, practiced chemistry, become a doctor, was interne two years at John Seally hospital, and have served in a medical college for two years. I was married this last summer to an Ohio girl."

Doctor Fay holds the degrees of bachelor of science, master of arts, and doctor of medicine, and is instructor in bacteriology in the medical college of the University of Texas at Galveston.

DISCUSSES BUSINESS TRAINING

Miss Alice Loomis, '04, professor of home economics in the University of Nebraska, writes a discussion of business training for women, for the March number of Agriculture. She says:

"The recognition of the need for the training of women in business methods has been growing recently in many quarters. In 1900 one out of every three women of marriageable age in the United States was unmarried or widowed. That these women need this training is self-evident. That the other two thirds would be benefitted by it is believed by many people directly affected, by lawyers, bankers, merchants, and by other business men who have seen the results of ignorance in this line.

"The General Federation of Women's Clubs is considering the establishment of a department of business, coördinate with art, civics, home economics, literature, and others. The Lincoln branch of the Association of Collegiate Alumnae has discussed the necessity for including this subject in the curriculum of schools. The commerce and home economics departments of the Lincoln high schools are working on a course in household accounts which should help to meet this problem.

"The home economics workers in the extension service of the University of Nebraska have many calls for help in the methods of household accounting and they are getting material in shape for distribution. The women students in the school of commerce in our university have formed a business woman's club which is interested in many social and legislative affairs. In response to a request the school of commerce has offered this semester for the first time a business course for women. Mrs. Minnie England, who

is in charge, is assistant professor of economics and commerce, teaches courses in money and banking, and practical banking, and in connection with her college duties has the responsibilities of the head of a household and of a business woman."

CLASS OF 1912 TO RETURN

Definite plans have already been made by the class of 1912 for the reunion in June. Most of the members who have written to the officers in the last three weeks—and this includes a high proportion—will return this year for commencement. F. B. Nichols of Topeka is president and Miss Berta Chandler of Manhattan is secretary. Here is a part of a letter sent recently by the officers to every member of the class:

"The class of 1912 is still on deck with both feet. Not only that, but it has developed an increasing amount of pep along the way, together with some associate members, even unto the second generation. The clan has gained steadily in numbers, wealth, and power to this year of our Lord Nineteen Hundred Seventeen, and in the year of the Graduation of the Superclass of the Kansas State Agricultural college the fifth.

"Before the class disbanded in the June days of 1912 to go forth into the highways and byways of life, it was suggested that the big reunion of the class be held every fifth year, to the end of the trail. Conforming to the program, the reunion at the end of the first fifth year epoch will be held during commencement week in June. Plans were made for this reunion at the class meeting last June.

"These plans include first of all a general good time, in which a record of the experiences of the members will be a feature. Members from distant states will tell at one of the meetings, in a formal program, of their adventures. Letters will be obtained from the few classmates who cannot come, and these will be read to the class.

"An estimate of the probable attendance was made by the officers and it seems likely that it will be about 75 per cent of the full membership. Members from the far away states, such as California, Washington, the Dakotas, Minnesota, and Pennsylvania, have already said that they will come. So far, no one from Kansas or the surrounding states has reported that it will be impossible to attend.

"We are sure, of course, that you will be here, for it is just coming back home, you know, back to the 'beacon across life's sea' that has done so much to make life a little brighter and better for you. More than that, it's a family reunion, if you please. We left the college halls in the morning of life five years ago—now let's all go back, back home to our classmates of those old college days of the past. We all want to see you and the candle is burning brightly in the window there. Won't you tell us that you'll come? And then when you write to the other 12's won't you tell them that you are coming back, and urge them to return, too, for the greatest class reunion the college ever had?"

DIGGING, SPRAYING, AND SHEEP COMBAT DANDELION

Lawns Sometimes Have to be Plowed Up and Reseeded in Order to Get Rid of Troublesome Weed

Dandelions may be exterminated from small areas of land by digging the weed out or by spraying with poison and from large tracts by the pasturing of sheep, according to M. F. Ahearn, professor of landscape gardening in the Kansas State Agricultural college.

"Many and varied are the ways that have been tried to eradicate the dandelion from the lawn," said Professor Ahearn. "Needless to add most of them have been failures. The dandelion is a thrifty, reproductive plant that is constantly striving to prove to the world that it is entitled to a place in nature's household.

"Nature has endowed this plant with such a stalwart defense that it

has discouraged many human beings in their efforts to break down the first line of trenches. Principal methods used to get rid of the dandelion have been confined to digging it out or spraying it with some poison in the hopes that it would ultimately have to surrender. Despite the combined efforts of the allies, the dandelion is still holding out and seems to be destined to occupy the center of the stage for some time to come.

"Seriously, it is a hard weed to combat and it is harder still to give directions for getting rid of the dandelion. On small lawns constant and persistent digging of the weed finally will get the better of it. On a large area, the only remedy that has given favorable results is the pasturing of sheep.

"If a lawn becomes too badly infested with dandelions it is well to plow them under and reseed the ground. This is a drastic remedy but at times it is absolutely necessary. Poison sprays have proved to be of little value in the control of the weed in the lawn. Such a spray would be helpful if the dandelions were at the side of a driveway on ground that has no other vegetation. Then the solution can be made strong enough to kill the dandelions because there would be no danger of injury to surrounding plants.

"Coöperation of neighbors may help a great deal in keeping lawns free from dandelions. If everybody would dig dandelions early and often it would tend to reduce the crop. The best advice that can be given is to keep everlastingly after them."

SHEEP SHOULD BE SHEARED AS SOON AS WEATHER IS SETTLED

Inexperienced Person Can Do Work Readily by Means of Machine

Sheep should be sheared in the spring as soon as the weather is settled, according to A. M. Paterson, instructor in animal husbandry in the Kansas State Agricultural college.

If the weather turns cold after shearing, the sheep will need protection for a few days as there is danger that the animals will take cold. Particular care should be taken if the ewes are suckling lambs. If the ewes take cold at this time, there is danger of the flow of milk being stopped. This would give the lamb a serious setback.

To shear sheep by hand takes an experienced man but with a machine an inexperienced person can do the work nicely. A good machine costs less than \$12, and more wool can be obtained than through shearing by hand. After the fleece has been taken off, all tags and dust should be removed and the wool tied in a neat bundle with wool twine. The wool should then be packed in wool sacks and either shipped to a reliable commission firm or sold to buyers.

OUTDOOR BASEBALL PRACTICE STARTS ON COLLEGE CAMPUS

Missouri Tigers to Open Season Here with Games April 9 and 10

Baseball practice is in swing at the Kansas State Agricultural college. Saturday the baseball men left Nichols gymnasium, where they had been holding preliminary practice for three weeks, and sallied forth to the college campus. This week they are going through light batting and fielding practice.

"Hitting will be our big objective," said Z. G. Clevenger, director of athletics. The men will go through batting practice every day that they are out of doors. I hope the players will have their batting eyes in better training than last season."

The Missouri Tigers will open the season here April 9 and 10. The schedule: Missouri at Manhattan, April 9 and 10; Nebraska at Manhattan, April 27 and 28; Missouri at Columbia, May 2 and 3; St. Mary's at Manhattan, May 10; Nebraska at Lincoln, May 16 and 17; Kansas at Lawrence, May 23 and 24; St. Mary's at St. Mary's, May 29; Kansas at Manhattan June 1 and 2.

MUCH WORK FOR SUMMER

EXTENSIVE PREPARATIONS FOR SPECIAL COLLEGE SESSION

Institution Will Offer 150 Courses to Meet Needs of Teachers and Others—Special Addresses by Specialists from Kansas and Other States

Seventy members of the faculty will give 150 courses in the summer school of the Kansas State Agricultural college. This is the most extensive work ever offered by the institution in a summer session.

The work has been arranged to fit the real needs both of teachers and of other persons who want to perfect themselves in their work. Work is offered which will be credited in the regular four-year college courses, including agriculture, the various lines of engineering, home economics, general science, and industrial journalism.

Many courses will also be given to meet the special needs of teachers who are emphasizing modern industrial subjects in their schools. In many of the lines of work taught by the college the demand for competent instructors is greater than the supply, and by taking summer courses teachers of experience can obtain specific preparation in these lines of study.

CHANCE FOR THE TEACHER

"The teacher," commented Dr. E. H. Reinsner, director of the summer session, "can do nothing better than to spend some weeks in the summer in fitting himself for a higher grade of teacher's certificate, in getting a better mastery of the subject matter he is going to teach, in learning new and better methods of teaching, or in expanding his general knowledge and improving his general culture."

Special features of instruction and entertainment are offered in the summer school. A summer school chorus, an orchestra, and a literary society are regularly organized.

MANY SPEAKERS SECURED

Numerous specialists from outside the state and prominent Kansans will speak at student assemblies in the summer. Among these will be Dr. David Snedden, professor of educational administration in Teachers' college, Columbia university; Mrs. Henrietta W. Calvin, specialist in home economics for the United States bureau of education; Dr. Edward Burnham, professor of rural education in the Western State Normal school, Kalamazoo, Mich.; Dr. Layton S. Hawkins, specialist in agricultural education for the University of the State of New York; Miss Grace Schermerhorn, formerly associate professor of home economics education in the Iowa State college; W. D. Ross, state superintendent of public instruction; Dr. H. J. Waters, president of the college; C. E. St. John, assistant state superintendent of public instruction; Dr. William M. Jardine, dean of agriculture; Mrs. Mary Pierce Van Zile, dean of home economics; L. A. Fitz, professor of milling industry; and Dr. M. C. Tanquary, assistant professor of entomology, who spent several years recently in Arctic explorations.

OUTDOOR PROGRAMS PLANNED

On Thursday evening of each week a special program will be given on college campus. Last summer out-of-door motion picture shows, community "sings," and folk games proved of much interest, and these will be continued and improved upon in the coming session.

The list of subjects in which instruction will be offered in the summer school are these: agronomy, animal husbandry, dairy husbandry, horticulture, poultry husbandry, veterinary medicine, applied mechanics and mechanical drawing, manual training, shop practice, steam and gas engineering, domestic art, domestic science, home art, athletics and physical education, bacteriology, botany, chemistry, economics, education, English, entomology, German, history and civics, industrial journalism and printing, mathematics, music, physics, public speaking, and zoölogy.

CLEAN HOUSE BY PLAN

SYSTEM WILL SAVE LABOR AND INCREASE EFFICIENCY

Housewife Is Right in Selecting Spring as Time for the Job, as this Permits Articles to be Taken Out-of-Doors—Sun Is Beneficial

Importance of using system in house cleaning is emphasized by Miss Rebecca Bartholomew, assistant in domestic science in the Kansas State Agricultural college.

Spring is the most practical time of the year for this work, as the weather permits articles to be taken outside, pointed out Miss Bartholomew. All cooking possible should be done in advance, so that the preparation of meals will occupy little of the housekeeper's time.

CELLAR AND ATTIC FIRST

The cellar and attic should be cleaned first, as this gives a place to store articles. Furniture or carpets which must be taken to the cleaner or repairer should be sent at this time and kept there until the work is finished.

Even if a vacuum cleaner is used, carpets should be cleaned outdoors as the sun and air are beneficial. Carpets should be laid flat, and then beaten with a flat wire beater with a broad surface. Carpets and rugs should never be thrown over a line or shaken as the strain on the threads is too great.

DO NOT FOLD CARPETS

After the carpet is cleaned, it should be rolled and placed in a clean space. Carpets should not be folded as this is injurious, takes up much space, and is difficult to do.

The curtains are next taken down. If draperies are not used in summer, they should be washed, and packed away unstarched. Closets and pantries should always be cleaned before the room adjoining.

After the windows are washed, the screens are to be attached. This should be done because the first flies come with the warm weather.

ART OUTDOORS AS WELL AS IN THE GALLERIES

People Shouldn't Have to Enter American City Through an Ash Heap, Thinks Miss Holman

The American people should get away from the habit of associating art with galleries, paintings, and statuary only. There is just as much art outdoors as in the galleries, in the opinion of Miss Araminta Holman, assistant professor of home art in the agricultural college, who gave an illustrated talk before the student assembly.

The United States has been more backward in the development of art in its cities than the countries of Europe, believes Miss Holman. France has spent the most money beautifying her cities, but the rural districts of England show more evidence of an eye for art. The efforts of the United States in its larger cities has been more towards the betterment of hygienic and social conditions.

Many of the most beautiful buildings in the United States are the old ones. The early builders had simplicity, sincerity, and consistency in their work. Miss Holman showed pictures of correctly and incorrectly erected buildings.

"The American people are especially careless about the construction of waterways, railways, and other means of communication and travel," said Miss Holman. "A person entering most of our large cities, either by rail or water, has usually to pass through the city ash heap. Our harbors and railway stations could be artistic, if care were taken in construction."

SANITARY SURROUNDINGS TO KEEP HOGS IN GOOD HEALTH

Prevention Is Cheapest Way of Dealing with Disease

Sanitary conditions tend towards general thrift among hogs. It pays to keep the surroundings clean, points

out Ray Gatewood, instructor in animal husbandry in the Kansas State Agricultural college.

"Prevention is always the cheapest and easiest manner in which to deal with disease," said Mr. Gatewood. "The houses should be kept clean, dry, and free from dust. In case the house becomes foul it should be cleaned and disinfected and a small amount of lime should be scattered about the floor. It is also a good practice to whitewash the walls frequently."

"The lots should be kept clean. Cobs should be burned and the ashes and charcoal given to the hogs. The pens should be kept free from manure and, where possible, it is a good practice to move the hogs to new soil. This helps to keep them in a healthier condition."

"Keep a close watch for the appearance of disease. Find the trouble and act accordingly. Do not put it off too long, for a great loss may be incurred by waiting. Unthrifty hogs and profit do not go hand in hand."

FARM BUREAUS ORGANIZED IN TWO MORE KANSAS COUNTIES

And Others Expect to Have Plans Completed Within Short Time

Farm bureaus have been organized in Morris and Franklin counties and the county commissioners have made the appropriations asked for by the farm bureau organizations. These counties are now ready to employ county agents as soon as men can be secured for the positions.

Anderson and Shawnee counties are next in line and expect to have their organizations completed and all necessary funds raised within two weeks.

SHIPMENTS OF COTTONSEED PRODUCTS NEED ANALYSIS

Shortage in Protein and Weight Found in Some Cases, Says Inspector

All purchasers of cottonseed products should have each shipment analyzed, asserts A. E. Langworthy, feed-stuffs inspector in the Kansas State Agricultural college.

"Some of the shipments are short in protein and weight," said Mr. Langworthy. "The quality of the products in some cases is not up to the standard of the grade purchased. Each shipment should be analyzed and weighed. If found to be deficient in either protein or weight, the feed control office should be notified at once."

The misbranding of cottonseed feed products has been so flagrant that the United States officials are taking action in the matter. The United States government has seized several cars of cottonseed products which were found by United States agents to have been shipped in violation of the United States laws.

CRUDE OIL BETTER THAN MANUFACTURED HOG DIPS

Will Kill Lice and Also Soften Skins and Brighten Hair of Swine

Control of lice on hogs is an important factor in the development of the swine. Crude oil not only kills lice, but in addition destroys the nits, softens the skin, and brightens the hair.

Many hog dips are on the market, which are widely used, but the use of crude oil gives more satisfactory results, in the opinion of Ray Gatewood, instructor in animal husbandry in the Kansas State Agricultural college. This oil may be applied by the use of patent hog oilers, but as a rule these are not satisfactory for they are expensive and many do not apply the oil in a satisfactory manner.

One of the most satisfactory methods of applying crude oil is to drive as many of the hogs as possible at one time into an inclosure in which there is a cement floor. Oil may then be applied to the hogs with an ordinary sprinkling can. They rub against each other and the oil becomes evenly distributed. They should not be let out of the pen until this is accomplished.

LAND POLICY IS NEEDED

WILL INSURE UPBUILDING OF FERTILITY IN AMERICAN SOILS

War Merely Caused High Prices a Few Years Ahead of Time, Believes Agricultural Economist—Crop Yields Have Decreased

A land policy which will insure the maintenance and upbuilding of soil fertility will be an important factor in increasing production and thus overcoming high prices for the necessities of life, according to Theodore Macklin, in charge of agricultural economies in the experiment station.

The war, Professor Macklin believes, merely rushed the nation into a period of high prices a few years before the time when American agricultural economic policies would have produced practically the same results. Because of the war 30,000,000 people have been diverted from the production of food-stuffs to the making of war materials, and crop failures and transportation difficulties have aggravated the situation. These, however, are temporary problems.

HAS NOT CONSIDERED FUTURE

A much more significant matter, in Mr. Macklin's opinion, is involved in American agriculture, which in the past has insufficiently considered the future.

"Very fertile soil in the hands of farmers who have great technical ability and experience, using highly developed and efficient kinds of farm machinery, obviously will produce much greater acre yields than will poor soil in the hands of the same men," said Mr. Macklin. "Forty years ago the soil of the great prairies of the central west was virgin and represented a fertility of 100 per cent. At that time farmers had all that could be desired in the way of rich soil but modern farm machinery did not exist while agricultural knowledge and experience in farming as we know them today were scarcely dreamed of."

FERTILITY LOSS 30 PER CENT

"The result of farming this virgin soil of 100 per cent fertility, with poor farm machinery and by men who had neither the knowledge nor the experience of farmers of today, was the securing of crop yields which have on the average not been materially increased since, despite the fact that the last 40 years has seen the application of the most highly developed scientific methods with the most efficient farm machines that the world has known. "The lack of a land policy, which has permitted, during this preliminary adjustment period in American agriculture, the loss of 30 per cent of the original soil fertility, is the leak which has prevented the increased yields that should have come with our marvelously improved knowledge and means of farming."

INDIVIDUAL POLICY INADEQUATE

"An unregulated individual policy of maintaining soil fertility, which fertility is essential in insuring an ever increasing yield of crops with each advance of technical agricultural information, is wholly inadequate. If the consumers want relief from the grip of abnormally high prices, the maintenance and upbuilding of soil fertility must be accepted as a public duty to be made effective by the administration of a comprehensive land policy adequate to the solution of this problem."

"The world over, whether in Ireland or New Zealand, Russia, or Turkey, private responsibility has failed to solve these difficulties, upon the threshold of which the United States is making her first step. The producers and consumers of every state have it within their power to demand the study and selection from the experience of other nations which will bring together the parts of a complete land policy through which may be obtained the most important permanent relief for oppressive prices."

Turkey ranches have been established in parts of California and other western states where there is unlimited range.

MISS BENTLEY WINS SCHOOL OF AGRICULTURE ORATORICAL

Represents Philomathian Society in Second Annual Contest

Miss Mabel Bentley, the representative of the Philomathian society, won first prize in the second annual intersociety oratorical contest of the school of agriculture held in the college auditorium Saturday evening. J. Ralph Nutter of the Hesperian society won second place and W. O. McCarty of the Lincoln society third.

ENGINEERING STUDENTS ARE SOUGHT BY MANY COMPANIES

Men Who Will Take Degrees in June Are Practically All Placed

Practically every engineering student who will be graduated in June has a job, or has under consideration four or five different positions from which to choose a place, according to A. A. Potter, dean of the engineering division in the Kansas State Agricultural college.

"We could place many more graduates than we shall have," said Dean Potter. "Call after call has come, but we have not been able to meet the requests. Several eastern companies have been unable to secure any graduates from the college."

FIRST DEBATES OF SERIES ARE LOST BY AGGIE TEAMS

Baker and Ottawa Win Contests in Discussion of Minimum Wage

The first debates of the pentangular series resulted in two losses for the Aggies—a two to one decision in favor of Baker here and a unanimous decision for Ottawa at Ottawa were the results of the Friday evening contests. The question debated was the minimum wage.

The Aggie affirmative team was composed of Fred Carp, junior in animal husbandry, L. R. Hiatt, senior in animal husbandry, and Floyd Hawkins, junior in journalism.

The Kansas State Agricultural college negative team which contested the Baptists at Ottawa was composed of Calvin Medlin, A. F. Swanson, and Paul Findley. All the Aggie debaters were new men, except Mr. Hawkins, who had debated three times before.

GRADUATES OF COLLEGE GET CHANCE TO ENTER MARINES

One Man Already in Corps, Three Others Nominated for Commissions

The Kansas State Agricultural college has in the marine corps today one of her most popular recent graduates, Emmet W. Skinner, '16, according to Captain Fred Delano, chief recruiting officer of the central division, who spoke before the student assembly.

"Three more students have been nominated," said Captain Delano, "and it is hoped that more will signify their intention of taking the examination. Graduates of this institution are required to pass only a physical examination. If successful they are given a commission as second lieutenant at once. Further education is obtained after enlistment. The salary is \$1,800 a year for a four year term. A man may resign at any time, unless the United States be at war."

The United States marine corps, according to Captain Delano, has in the last ten years, ranked above the marines of England, Germany, Italy, Japan, and other foreign countries in competitive tests.

DOCTOR NABOURS GETS BACK FILMS SEIZED BY RUSSIANS

Officials Also Took Professor's Camera, Which He Expects Returned Likewise

More than 200 pictures and films have been received from Russia by R. K. Nabours, professor of zoology. These pictures were taken by Doctor and Mrs. Nabours last summer. The cameras and films were taken from them, when they entered Russia, by government officials. The films were held for more than six months. Doctor Nabours is confident that the cameras will be returned after the war.

CHICK HAS TWO NEEDS

FEED AND CARE DETERMINE ITS HEALTH AND PRODUCTIVENESS

Eggs Laid Under Free Range Conditions Produce Best Offspring, but Young Birds Must Have Attention in First Few Weeks

The care and feed given to a chick during the first few weeks determine to a large extent its future health and productiveness, according to N. L. Harris, superintendent of the Kansas State Agricultural college poultry farm.

"The most critical period in the life of a baby chick is the first four days," said Mr. Harris. "Many of the fatalities at this time can be traced directly to the condition of the breeding stock. An overfat hen is not in a condition to produce a strong, vigorous germ. Neither can good results be expected from hens confined in small houses and runs."

COLD BROODER CAUSES SHOCK

"Free range is the ideal condition for the production of eggs that will hatch chicks which are full of vitality. Most of the baby chicks produced from eggs laid by hens under free range conditions are free from common chick troubles."

"A common cause for high mortality in the early period of a chick's life is the shock it receives when taken from a highly heated incubator and placed in a brooder where the temperature is from 10 to 20 degrees lower. The atmosphere of an incubator is saturated to some extent with moisture, which resembles the steam bath. The delicate system of the chick receives a serious shock when it is moved from the incubator to an ordinary brooder. The result is a weakened vitality and digestive troubles."

ACCUSTOM CHICKS TO OUTDOORS

"Many of the chick troubles will not cause death immediately. A few chicks will die in a day or two while others will linger for perhaps two weeks. This makes it impossible for those not acquainted with the conditions to locate the cause of the trouble."

"Before being removed from the incubator the chicks should be accustomed to the outside atmospheric conditions by gradually opening the incubator door. This operation will perhaps require 12 hours. A brooder, if properly built, can be made to maintain a temperature of 100 degrees in the warmest part and 75 degrees in the coolest compartment."

STRONG SENSE OF LOCATION

"As soon as possible after the chicks have been placed in the brooder they should be allowed a small run on the ground. The first sense developed in a baby chick is that of location. Once it learns where the source of heat is, it will return as soon as it becomes slightly chilled."

The temperature of a baby chick's body is 105 degrees. For this reason some compartment of the brooder should be heated to approximately 105 degrees, pointed out Mr. Harris. The quarters should be arranged so that the sunshine can enter freely. Essentials to the rapid development of the chick are plenty of sunshine and air.

BIRDS MUST GET EXERCISE

Exercise is important. When chicks are hatched late in the season they will receive all the exercise necessary for healthy growth by scratching for bugs, worms, and small green shoots. When they are hatched in cold weather it is impossible to allow them to run outdoors. For this reason some means must be provided whereby the chicks will have the necessary exercise.

All grain should be scattered in a shallow litter of chaff or alfalfa leaves. This will induce scratching. Another method which has proved highly satisfactory is the use of "onion worms." An onion is sliced crosswise. If the slices are thin enough, long pieces of onion somewhat resembling worms will result. The tussle over this improvised angle worm will furnish the much needed exercise and the onion will also serve as an appetizer.

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NOT RESULT OF CHANCE

HIGH PRODUCING COW IS PRODUCT OF GOOD METHODS

Judicious Breeding, Feeding, and Care Determine Her Development, Points Out Prof. O. E. Reed—Best Rations for Young Heifer

The high producing cow is produced by no haphazard methods, asserts O. E. Reed, professor of dairy husbandry in the Kansas State Agricultural college. She is the product of judicious breeding, feeding, and care.

The best time to start feeding the heifer, to produce a good milk cow, is when it is young. The calf should receive its mother's milk during the first month of its life. Beginning at the end of three weeks, skim milk should gradually be substituted for the whole milk. The skim milk should be supplemented by grain and hay.

CALVES ARE OFTEN OVERFED

Too many farmers do not realize the feeding value of skim milk. They think that because the fat has been removed, a much larger quantity of milk should be fed. As a result, the calves are often overfed. Shelled corn has been found a good grain supplement to replace the fat content of the skim milk. The calf should be fed skim milk until at least six months of age and as much longer as the milk is available.

Timothy, Sudan grass, or prairie hay is desirable for the young calf. The leguminous hays tend to produce digestive disorders.

MUST GET ENOUGH EXERCISE

Plenty of water should be supplied for the calf from its birth, but water should never be mixed with the milk. Exercise is essential for the best development of the calf as well as all other live stock.

When the calf is several months old it may eat leguminous hays with no danger of digestive troubles. Alfalfa has proved its worth in building up both the muscle tissue and the bone content of the body. The heifer should be bred to calve at from two to 2½ years of age. The pregnant heifer should receive a liberal ration containing a high per cent of protein and ash, as these are necessary for the development of the fetus. If these elements are not present in sufficient amounts, however, the body of the heifer will suffer rather than the fetus.

TRANSPLANT TOMATOES WHEN FROST IS OVER

They're Warm Weather Vegetables and May Be Injured by Cold, Say Horticulturists

The tomato is classed with the warm weather vegetables and should not be transplanted to the field until all danger of frost is past, advises the department of horticulture in the Kansas State Agricultural college.

The transplanting season in Kansas starts in April and continues throughout May. The earlier tomatoes are set in the field—provided they are not hit by a frost—the better. The first two weeks in May sometimes bring a light frost.

The best success is obtained by growing the tomato plants in a small flower pot or paper pot. The plant may then be set out in the open field with a ball of soil, so that there is less danger of breaking the feeding roots. Large plants should be set deeply, and if long and spindling, a greater portion of the stem should be placed in the ground. Set the plants a little deeper in the soil than they formerly stood. If water is used, loose soil should be pulled over the puddled portion to prevent evaporation.

Medium sized plants stand the hardship of planting better than small

plants. Do not permit the roots to wilt, as any check to their steady growth will cut down the yield. During hot, dry weather the plants should be covered in the daytime with a newspaper shaped like a cone. This method is only practical on small farms.

Large varieties are set at least four feet apart each way. The smaller, or tree, tomatoes may be set two feet apart in the row and three feet between the rows.

Tomatoes are usually pruned to one, two, or three stems. These plants are staked and tied with some thick material to prevent bruising of the stems. This pruning usually begins when the plants are from 12 to 15 inches high. Experiments which have been tried show a higher yield from plants so treated. Pruned vines permit of a much longer picking season.

Tomatoes grow well on almost any soil, but rich, friable, sandy loam is considered best for a heavy yield.

Cultivation should be begun as soon as possible after the plants are set in the field and kept up during the entire summer. Cultivate after every rain or after every irrigation. During a long, dry spell cultivate the soil often to conserve the moisture. Cultivation should continue as long as a cultivator can be run between the rows without breaking the plants.

BRIGHT COLORS HAVE NO PLACE IN THE SICK ROOM

Draperies Belong in Same Class, Says Home Economics Specialist—Walls Should Be Washable

Draperies and bright colors have no place in the sick room, believes Miss Mary M. Baird, instructor in home economics, division of extension, Kansas State Agricultural college.

The sick room should contain only the necessary furniture, thinks Miss Baird. This consists of a bed, one chair, and a table. A rocking chair is out of place.

The bed should be placed so that the light will not shine directly on the patient. Iron or brass beds should be used for the sake of cleanliness. Woven wire springs reinforced at intervals are just as strong and comfortable and are more sanitary than coiled springs.

The mattress should be the best which can be afforded, and should be covered with an envelope cover. The bed should be raised by adjusting posts, or by means of a hollowed block in order that the home nurse may not be obliged to stoop more than is necessary in caring for the patient.

Blankets should be used instead of quilts or comforts, as they are more easily sterilized. The pillows should not all be alike. Hair makes a good pillow as it allows ventilation. Down makes a soft pillow, and excelsior a firm pillow. In case of an injured limb, the excelsior is good to bolster it up. Cotton is the desirable material for bedding, as it is cheap, serviceable and easily sterilized. Linen is good in fever, as it has a cooling effect.

The best location for the sick room is in the southeast corner of the house. Windows should be on two sides to insure good ventilation. A second floor room is more quiet, but if the housekeeper must be nurse, it is well to have it near the kitchen.

If possible, the walls should be washable. If wall paper is used, it should have an indistinct pattern in subdued colors. There should be no carpet or large rug. A small, removable, washable rug is permissible. If the patient has a favorite picture, it helps to have it where he can see it without tiring himself. If there is no preference, it is well to use a quiet scene, and to change it frequently.

LOOK OUT FOR BEETLE

POTATO PEST DUE TO COME IN APRIL OR MAY

Paris Green, Applied Dry or in Spray, Is Recommended by Entomologist as Effective Remedy—Some Use Lead Arsenate

The potato grower should begin watching for the attack of the Colorado potato beetle as soon as the young potato plants come through the ground, advises George A. Dean, professor of entomology in the Kansas State Agricultural college.

The Colorado potato beetle is the most common and destructive enemy of the potato grower in Kansas, according to Professor Dean. The adult insects hibernate in the earth in the winter months. The warm sunshine of April or May brings them out.

THEY'RE HEAVY EATERS

The adult beetle is a stout, striped insect about half an inch in length. As soon as the young potato plants appear, the adult female beetles deposit their eggs on the under side of the leaves. One female beetle lays an average of 500 eggs in one month. In one week after the eggs are deposited, the larvae hatch out and immediately begin gorging themselves on the leaves and eat an amount of food out of all proportion to their size.

These larvae enter the ground after 2½ or three weeks and pass through the pupal stage. In a week or two the adult beetles of the second generation appear. In Kansas and the states where the beetle is most injurious, two generations always appear and in some seasons three in one year.

POISON APPLIED IN MORNING

One of the most effective remedies for this pest is Paris green, according to Professor Dean. For small patches it may be used dry by mixing it with 50 times its weight in flour, slaked lime, or land plaster. This mixture should be applied in the morning when the dew is still on the plants, by means of a perforated can or some sort of a powder gun.

On large fields it is best to apply the mixture in the form of a spray. One pound of Paris green and one pound of freshly slaked lime will kill the larvae but it is necessary to use two or three pounds of Paris green to kill the beetles.

"Many growers prefer to use three to five pounds of lead arsenate to a barrel of water because it is more adhesive than the mixture of Paris green, and there is no danger of burning," said Professor Dean. "Powdered lead of arsenate may also be used as a dust spray just as soon as the insects are found working on the plants, and the application repeated when the other generations of insects appear."

KEEP KANSAS ROADS IN CONDITION BY DRAGGING

Highways Are in Better Shape than Usual, Says W. S. Gearhart—Suggestions for Spring Work

Kansas roads are in better condition than usual at this time of year. Their upkeep will depend upon systematic dragging, points out W. S. Gearhart, professor of highway engineering in the Kansas State Agricultural college.

"Drag the roads as soon after each rain as possible—never drag a dry road," said Professor Gearhart.

"A light drag should be pulled at an angle of approximately 45 degrees so that a small amount of dirt is drawn to the center. Begin so that the drag extends outside of the traveled portion. Ride on the drag, driving the team in a slow walk.

"The width of the road to be maintained by the drag should be from 16 to 24 feet. First drag a little more

than the width of the track, then gradually increase until the desired width is obtained. Always drag a little earth to the center until it is raised 10 or 12 inches above the edge of the traveled way.

"When the roads are first dragged after a muddy spell the wagons should be driven to one side if possible until the road has a chance to become partly dry."

Dragging reduces the mud in wet weather and dust in dry weather, pointed out Professor Gearhart. The best results are obtained only by repeated operations, and constant attention is necessary to maintain an earth road in its best condition.

Every spring, before the ground becomes too hard, the road should be thoroughly gone over with a grader to clean out the ditches, so that the water may have a free outlet. The ruts and holes should be filled, elevations in the road and shoulders on the side of the road planed off, the grade improved, and the road put in good condition.

Earth roads have a pronounced tendency to rut. When ruts begin to appear on the surface great care should be used in selecting new material, with which they should be filled immediately. One fundamental principle in the repair of any road is, that whatever material is used in the construction of the surface, the same material—and no other—should be used in its repair. A good road with a surface of clay should be repaired by using clay, a gravel road with gravel, and a surface of limestone with limestone.

WARREN KNAUS PRESENTS COLLECTION TO COLLEGE

Graduate, Known as Authority on Coleoptera, Gives Material of Enormous Value for Scientific Study

Warren Knaus of the class of 1882, Kansas State Agricultural college, has donated to the entomological museum of the college his valuable collection of Coleoptera, or beetles.

Ever since he was a student in the college, Mr. Knaus, who is a McPherson newspaper man, has spent practically all his spare time and vacations in collecting and studying beetles. He has made many trips into the arid regions of Mexico, Arizona, Texas, and New Mexico, to collect insects. These trips have been productive of a great many new species. His collection contains a number of beetles that are found only in one or two museums in the world, and these were furnished by Mr. Knaus.

Noted coleopterists of this country and Europe have visited Mr. Knaus for the purpose of looking over his collection of rare insects. Many a museum, entomologists state, would consider itself very fortunate even to have the opportunity of purchasing such a collection as Mr. Knaus has built up in more than 35 years of collecting and exchanging of insects.

"This institution is indeed fortunate," commented George A. Dean, professor of entomology, "in having among its graduates one not only a well recognized authority of the Coleoptera but also one so loyal and so interested in the welfare of the Kansas State Agricultural college."

The college in accepting the collection has agreed to keep it together as the Warren Knaus collection and to take the best possible care of it.

Specialists of the United States department of agriculture studying the production of concentrated fertilizers have worked out methods for producing ammonium potassium phosphate, potassium phosphate, and ammonium phosphate. These processes will be patented for the benefit of the people of the United States.

PLANT FOR A GRANDSON

FARMER SHOULD GROW ORCHARD WINDBREAK FOR FUTURE

Pine Trees and Chinese Arbor Vitae Are Best but if One Prefers Hardwoods, Walnuts, Pecans, or Oaks Will Serve the Purpose

Plant a good orchard windbreak for your grandson. The best windbreaks are those planted by the farseeing grandparent for his grandson, in the opinion of Albert Dickens, professor of horticulture in the Kansas State Agricultural college.

A windbreak is desirable wherever an orchard is exposed to strong winds, pointed out Professor Dickens. Pine trees and Chinese arbor vitae planted years ago now constitute the best windbreaks.

Objections are often made to the red cedar on account of the fungus, one stage of which spreads to apple trees. The damage from this source is probably overestimated. The real objection to evergreens is that they are slow in growth, averaging 1½ feet a year. They afford, however, the maximum resistance to wind all the time. The roots do not spread widely and the orchard trees can grow within a short distance of the windbreak.

LUMBER INVESTMENT ALWAYS PAYS

If the prospective grandfather does not like pines he should plant hardwood trees, such as walnuts, pecans, or oaks. In 35 or 40 years these trees will make a good windbreak. The lumber investment always pays.

Cottonwood, hedge, and mulberry trees are much in favor. They are rapid growers and consequently the orchard trees must be planted several rods away. The rate of growth more than compensates the man who must protect his orchard in a short time for their greed in the use of soil. The growth of cottonwoods will pay rent.

PROTECTION SUMMER AND WINTER

Windbreaks protect the trees from both summer and winter evaporation and from cold. Snow lies more evenly in the protected orchard and melts less rapidly. The blossoms are protected from severe winds and the number of windfalls is lessened. Trees will grow more erect and in better form.

Windbreaks are, however, not unmixed blessings, believes Professor Dickens. Sometimes frost is more severe next to the windbreak, where the air does not circulate so freely. Injuries from insects and fungous diseases are more apt to occur, but these can be averted by spraying.

HOG BREEDING ASSOCIATIONS TO GIVE PRIZES IN CONTEST

Leader of Club Work Expects Enrolment of 600 in Competition

The National Duroc-Jersey and American Hampshire associations will each give \$50 in prizes to boys ranking highest this year with Duroc-Jersey and Hampshire pigs in the pig contest conducted by the agricultural college.

These special prizes will be in addition to the prizes offered by the college and the local club organizations. It is also expected that the Poland-China and the Berkshire organizations will give \$50 each to club boys who feed Poland and Berkshire pigs.

Last year 300 persons entered the contest. Otis E. Hall, leader, expects the number to be doubled this year. Entries will close May 1.

Melvin Jung, who won second prize in the contest last year, and who received several valuable awards aside from that offered by the college, sold his pig recently for \$100. He expects to be equally successful in the contest now beginning.

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J. D. WALTERS.....Local Editor
ADA RICE, '95, M. S. '12.....Alumni Editor

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WEDNESDAY, APRIL 4, 1917

A PROPHECY OF BETTER FARMING

Boys' and girls' club work is a prophecy of better farming. The best boys and girls of the rural communities are entering the clubs and vying with each other for first place in the contests. They are taking an intelligent interest in farming. They are realizing that farming is not mere drudgery, that it is a science and a business.

By this means many boys and girls who would otherwise go to the towns and cities will be kept on the farms. They will see the opportunities that farming affords and will be anxious to try their intelligence and their skill in solving farm problems and realizing farm opportunities.

BETTERING RURAL HEALTH

One of the most important conservation campaigns undertaken in the United States is that started by the committee on health problems of the National Council of Education, under the guidance of Dr. Thomas D. Wood, professor of physical education in Teachers' college, Columbia university. The campaign has for its purpose the improvement of health in the rural districts of the country.

After careful investigation, Doctor Wood has found country school children less healthy, on the average, than city children. The reasons he believes to be largely found in careless disposal of waste matter in the country, in contaminated water, in insufficient ventilation, in unbalanced rations, and in failure to have children examined by physicians and dentists.

Doctor Wood and his committee purpose to remedy these conditions through a campaign of education in the rural schools. The people of the country are intelligent and greatly interested in the welfare of their children. The improvement of conditions will be accomplished through pointing out just what is wrong with present modes of living. In the cities health regulations have been enforced largely through police power, and are still evaded by some, who do not realize the importance of sanitary conditions. In the country, thinly settled as it is, the careful enforcement of minute regulations would be impossible. Improvement there will come through education, and improvement based on education is a much more settled, more beneficial matter than improvement based on law.

BIDING HIS TIME

Every man must patiently bide his time. He must wait—not in listless idleness—but in constant, steady, cheerful endeavors, always willing, and fulfilling and accomplishing his task, that, when the occasion comes, he may be equal to the occasion.—Henry Wadsworth Longfellow.

PURCHASING CO-OPERATIVELY

The farm adviser of Kern county states that one farm bureau in that county has saved over \$900 to members through buying seeds, posts, cement, potatoes, and other commodities in car lots. Purchasing committees in other centers are likewise saving large amounts to members. Every day sees advancement in coöperation.—California Cultivator.

CROPS IN THE MOUNTAIN STATES

Winter wheat in the Rocky mountain states is coming through the cold season in fine shape, according to all reports. There has been a fair amount of moisture, a snow covering in most localities and very little trouble from wind or freezing up to the present time. Farmers in the dry land districts are approaching spring with the feeling that there is a good year before them. They are paying the high cost for everything in the line of seed, especially for Sudan grass, pinto beans, and alfalfa. The farmer who produces his own supply is the fortunate and the rare exception.

Snow reports from the range indicate good prospects for the irrigation farmer next summer, with two months more of the snowy season ahead of us. On the whole, early crop prospects for 1917 are favorable throughout the mountain region.—Western Farm Life.

LIVE STOCK INSURANCE

The subject of live stock insurance is not a new one. In fact, many of the breeders who are keeping high class stock do not pretend for a moment to leave this stock uninsured. They feel that the amount of money that is invested makes it hazardous for it to be unprotected against possible loss.

The life insurance business from the human standpoint is thoroughly worthy and heartily indorsed, but life insurance from the standpoint of dairy cattle is a thing of a little narrower scope and while as mentioned above it is not new, it is far less generally understood. To the established breeder it is a recognized necessity but it is not to the established breeder who is wise along this line, that we are writing particularly, but rather to the young man who has invested in his first few registered Holsteins. A well developed, well cared for normal Holstein cow is usually a very healthy creature, but she is just as susceptible to accident as an animal of less value and therefore it is imperative that the man who is willing to invest in such stock should guard his investment in every legitimate way. Live stock insurance is one of the safest of these.—Holstein-Friesian World.

CHOOSE THE RIGHT BOOKS

If any person given to reading were honestly to keep a register of all the printed stuff that he or she consumes in a year,—all the idle tales of which the very names and the story are forgotten in a week, the bookmaker's prattle about nothing at so much a sheet, the fugitive trifling about silly things and empty people, the memoirs of the unmemorable, and lives of those who never really lived at all—of what a mountain of rubbish would it be the catalogue!

The vast proportion of books are books that we shall never be able to read. A serious percentage of books are not worth reading at all. The really vital books for us we also know to be a very trifling portion of the whole. And yet we act as if every book were as good as any other, as if it were merely a question of order which we take up first, as if any book were good enough for us, and as if all were alike honorable, precious, and satisfying.

Books are not wiser than men; the true books are not easier to find than the true men; the bad books or the vulgar books are not less obtrusive and not less ubiquitous than the bad or vulgar men are everywhere; the art of right reading is as long and difficult to learn as the art of right living.

As a man aimlessly wandering about in a crowded city is of all men the most lonely, so he who takes up only the books that he "comes across" is

pretty certain to meet but few that are worth knowing.

Now this danger is one to which we are specially exposed in this age. Our high pressure life of emergencies, our whirling industrial organization or disorganization, have brought us in this (as in most things) their peculiar difficulties and drawbacks.

In almost everything, vast opportunities and gigantic means of multiplying our products bring with them new perils and troubles which are often at first neglected. Our huge cities, where wealth is piled up and the requirements and appliances of life extended beyond the dreams of our forefathers, seem to breed in themselves new forms of squalor, disease, blights, or risks to life, such as we are yet unable to master. So the enormous multiplicity of modern books is not altogether favorable to the knowing of the best.

The New Ideal of Education

Dr. Henry F. Cope in the Progressive Farmer

WE live in an age which is taking education in entirely new terms. To us it means not simply a routine familiarity with dead languages and ancient history, nor even a smattering of modern physical science and philosophy. It means equipment, training, habituation to right living. It means knowing what life means in all its richness, with the light of its past glory full upon it, with the promise of its present meaning before it. It means knowing how life is lived; it means so habituating men to live with other men that they may be able to live their lives and serve the common good with the greatest efficiency and value.

Public education ought to be the training of lives for public living. There, I am convinced, is the very heart of our weakness in educational matters—that our present system of public education is organized for the education of individuals in individualism. Democratic education must mean more than acquiring equal rights to privileges, equal rights to get and gain our own. It must mean common realization of equal duties, training in habits of living with our equals, and in the obligations of service. . . . We have over-mechanized our educational systems; they must be humanized and socialized. We must feel deeply what we all know—that knowledge passes away; it is not for itself; it is but a means of life, the life of all set in social harmony.

Every book that we take up without a purpose is an opportunity lost of taking up a book with a purpose; every bit of stray information which we cram into our heads without any sense of its importance, is for the most part a bit of the most useful information driven out of our heads and choked off from our minds.

When will men understand that the reading of great books is a faculty to be acquired, not a natural gift, at least not to those who are spoiled by our current education and habits of life?

An insatiable appetite for new novels makes it as hard to read a masterpiece as it seems to a Parisian boulevardier to live in a quiet country. Until a man can truly enjoy a draught of clear water bubbling from a mountain-side, his taste is in an unwholesome state.

The intellectual system of most of us in these days needs "to purge and to live cleanly." Only by such a course of treatment shall we bring our minds to feel at peace with the grand pure works of the world.—Frederic Harrison.

A QUARTER CENTURY AGO

Items from The Industrialist of April 2, 1892

A daughter arrived Monday at the home of Doctor and Mrs. Mayo.

Mrs. Kedzie has sold two of her city lots lying near the college to Mrs. Smith.

John Davis, '90, will finish the English course at the State Normal school in June.

The first class, naturally a small one in the spring term, is assigned to the machine shop.

G. L. Clothier, fourth-year, presented a paper before the Speer-Winans association yesterday.

Mrs. J. W. Naylor of Alta Vista brought her daughter to college this week and spent two days here.

The engineering classroom is in readiness for illustrations by the magic lantern, the slides for which Professor Hood makes.

H. S. Willard, '90, called on college friends several times this week. He leaves soon for Texas in search of a location for a doctor shop.

Chancellor Snow of the University, who lectured last evening before the Speer-Winans association, was the guest of President Fairchild.

J. E. Payne, '87, writes from West Point, Miss., of planting corn the last week in February. He thinks the climate of Mississippi as pleasant as that of California.

H. B. Gilstrap and G. V. Johnson, both of the class of '91, partners in the printing business at Chandler,

A SONG FOR OUR FLAG

Margaret E. Sangster

A bit of color against the blue;
Hues of the morning, blue for true,
And red for the kindling light of flame,
And white for a nation's stainless fame.

Under its folds, wherever found,
With hope in its every shining star;
Oh! fling it forth to the winds afar,
Thank God, we have freedom's holy ground.

Don't you love it, as out it floats
From the schoolhouse peak, and glad young throats
Sing of the banner that aye shall be
Symbol of honor and victory.

Don't you thrill when the marching feet
Of jubilant soldiers shake the street,
And the bugles shrill, and the trumpets call,
And the red, white, and blue is over us all?

Don't you pray, amid starting tears,
It may never be furled through age-long years?

A song for our flag, our country's boast,
That gathers beneath it a mighty host;
Long may it wave o'er the goodly land
We hold in fee 'neath our father's hand.

For God and liberty evermore
May that banner stand from shore to shore.

Never to those high meanings lost,
Never with alien standards crossed,
But always valiant and pure and true,
Our starry flag; red, white, and blue.

SUNFLOWERS

Some folks would rather be efficient than sensible.

We should all get behind Wilson, but not too far behind him.

The spring styles are just what you might not expect them to be.

The consumption of health hints in the United States is enormous.

If you are in need of a conception of eternity, buy a piano on the installment plan.

We are all, of course, hoping to see the day when Kaiser Wilhelm is just an ordinary Wearie Willie.

If Billy Sunday can convince New York that New York doesn't know it all, he will not have labored in vain.

The girls who wear the new spring "duds" for the ad writers look to weigh about thirteen ounces per linear foot.

There ought to be a law against putting automobile horns on flivvers and tortoise shell specs on just anybody.

According to the curve of normal distribution about fifty per cent of us are average individuals. All of which shows that the curve of normal distribution is very conservative in its estimates.

CRANBERRY MEN ADVERTISE

The cranberry growers of Wisconsin are coöperating with those of the other cranberry producing centers in an effort to advertise their product widely. They have adopted the trade mark "Eatmor Cranberries" and are joining forces in a campaign which during the first season is being carried on by the American Cranberry exchange, Chicago.

Something over \$20,000 will be expended in advertising "Eatmor Cranberries," the campaign including the use of space in Chicago dailies, window cards, street car signs, bill boards, and the distribution of booklets.

While cranberry growers are not particularly alarmed at overproduction they realize the value of advertising and have chosen Chicago as their first field of campaigning in order to be able to check up the results, and if the campaign is sufficiently successful they undoubtedly will enlarge upon the campaign from year to year.—The Fruit-Grower.

AMONG THE ALUMNI

Miss Eva Hostetler, '16, is rapidly recovering from her illness.

G. E. Denman, '16, is principal of the junior high school at Cawker City.

B. J. Taylor, '16, and his brother are managing their father's 1,280 acre estate south of Chapman.

B. R. Hull, '97, who is a well known Manhattan business man, recently became a paid up member of the Alumni association.

F. H. Freeto, '15, who has been working in the state highway engineer's office for several months, has accepted a position as city engineer of Holton.

H. W. Brinkman, '07, of Emporia, has been engaged as architect to draw the plans for the new \$30,000 Roman Catholic church which is to be erected this summer in Manhattan.

William J. Marshall, '14, and wife, Mrs. Ethel (Justin) Marshall, '10, have moved to Burlingame, where Mr. Marshall has been appointed to the pastorate of the First Methodist church.

L. E. Hutto, '13, of Big Timber, Mont., writes of having seen several graduates of the college at Bozeman recently, including Miss Almira Oglevie, '12; J. W. Brown, '12; and B. W. Whitlock, '13.

Miss Mildred Inskeep, '12, general secretary of the college Young Women's Christian association, entertained the retiring cabinet and the newly elected cabinet at a house party in the country on Saturday and Sunday.

Miss Martha S. Pittman, '06, writes from State College, Pa., where she is in the extension department. She says: "I often think of Kansas State Agricultural college days. I meet people from there so often that I do not feel so very far away."

E. L. Hageman, '11, visited the college Monday. Since his graduation he has been employed in civil engineering work. His experience has included power plant work in Tennessee and highway work in Tennessee and North Carolina. He is at present on valuation work for the interstate commerce commission.

Robert W. Clothier, '97, finished his work for the degree of doctor of philosophy in George Washington University, Washington, D. C., March 19. Mr. Clothier did most of the work for this degree at Cornell, finishing the required work in economics, education, and geology at Washington. His thesis is entitled, "Farm Organization in the Irrigated Valleys of Southern Arizona."

WATKINS IN ILLINOIS

The Orange Judd Farmer publishes a picture of W. E. Watkins, '06, and says this about him:

"The new adviser in Lake county, Ill., is W. E. Watkins, a native of Kansas and graduate of Kansas agricultural college, who for more than 10 years has been doing successful work in a practical way. He is the first Jayhawker to be brought to Illinois for county advisory work and indications are that he will sustain the good reputation of his state."

WOMAN FARM AGENT

Miss Alma Halbower, '14, has been appointed woman farm agent for Middlesex county, Massachusetts. The Anthony Bulletin comments on her appointment as follows:

"When New England wants something good New England comes to Kansas. When New England wants the best the call is for a Harper county, Kansas, product."

"Miss Alma Halbower is a Harper county girl, daughter of George W. Halbower. She is a graduate of Kansas State Agricultural college, class of 1914. After graduation there Miss Halbower took graduate work at Columbia university, New York. Last summer she was with the Lake Placid

club, at Lake Placid, N. Y. She has since been on the staff of the Massachusetts Agricultural college, Amherst, Mass., and she has just been selected as the woman farm agent for Middlesex county, Massachusetts. This territory is just outside of Boston and near the historic towns of Lexington and Concord.

"Miss Halbower is now at home and she will be at Anthony for about a month."

"The Bulletin congratulates Miss Halbower on her preferment and is quite sure she will advance in this work as she has in every other endeavor."

SCHOOL WORK IN MINNESOTA

Mrs. Mae (Hildebrand) Lyness, '14, writes from New Richland, Minn.:

"Just a word from the frozen north. We have been reading the Manhattan paper and comparing conditions there with those here. While your farmers are sowing oats, ours are driving in cutters and bobsleds, over drifts of snow all the way from three to eight feet deep. This winter has been very severe here and, while it has its attractions, yet we will welcome the coming of spring."

"We look forward to the coming of THE INDUSTRIALIST and always read the alumni news with much interest. We think the life membership plan a fine one and hope to add our names to the list of members sometime."

"Our work is in the community in which Dean Johnson of the extension division of the Kansas State Agricultural college, was born. Mr. Lyness has met and worked with several of his old playmates. Our local paper had a very fine article in last week's issue, telling of the progress of the work that Dean Johnson is doing in Kansas."

"Besides his high school work Mr. Lyness has two associated schools in which he directs the work in agriculture; and in the fall and spring he devotes many afternoons doing extension work along the lines of organizing farmers' clubs, cow testing associations, shippers' and breeders' associations, acre yield corn contest clubs, and assisting the farmers in various ways. His boys' corn club carried off all the county prizes this year and he was quite proud of them. Last fall he spent many afternoons urging the farmers to grow alfalfa and succeeded in securing fifteen or more to put in a few acres under the direction of the extension division. He has been re-elected with a very good increase in salary. This will be his fourth year here."

"I often go with him to the farmers' club meetings and enjoy it very much. I have enjoyed keeping house very well but am at present back in the school room. Our domestic science and art teacher took sick and I substituted for her. As she did not recover as she should, she resigned. The board elected me to finish the year's work and so now I am a full fledged domestic science teacher. I am enjoying the work and find that my 'Practical Cookery' and Kansas State Agricultural college notebooks are invaluable references. I have a group of camp fire girls that keep me on the constant lookout for something new and interesting."

SMALL CROP OF PUMPKINS VALUABLE TO HOG RAISER

Will Form Important Addition to Ration for Swine in Kansas

A small crop of pumpkins is a great aid to the hog raiser, in the opinion of Ray Gatewood, instructor in animal husbandry in the Kansas State Agricultural college.

Pumpkins can be grown at a small cost and form a valuable addition to the rations of hogs. They may be grown in the corn fields, especially where there is a poor stand.

The value does not lie entirely in their nutritive composition, but is due largely to the beneficial effects on the digestive tract, as they tend to regulate the bowels. It is asserted that the seeds are valuable as a vermifuge.

POP CORN MAKES PROFIT

USEFUL FOR BREAKFAST FOOD AS WELL AS OTHER PURPOSES

Most Farm Gardens Should Contain a Small Plot of this Crop, Says Agronomist—White Varieties Are Most Popular

Pop corn, although not grown on a large field scale in Kansas, may be made a profitable crop if given sufficient care and attention, asserts S. C. Salmon, associate professor of farm crops in the Kansas State Agricultural college.

"Any soil adapted to field corn will grow pop corn," said Professor Salmon. "A warm, well drained location, free from marshy places should be selected. If available, a loam soil is best. The ground should be plowed or spaded to a depth of eight inches or more and the surface of the plot thoroughly pulverized before planting."

MUST BE PLANTED THICKLY

"Pop corn is planted much more thickly than field corn. An ordinary corn planter equipped with special plates necessary for planting corn is used. When planting the common rice pop corn, the holes in the plates should be three-eighths of an inch in diameter, counter sunk on one side. Care should be taken not to drill pop corn too close to field or sweet corn as these grains easily mix with it and thus affect its popping value."

"The yield of pop corn per acre is not so large as that of field corn but the difference is usually made up by a higher price per bushel. The profit obtained in growing pop corn depends largely upon the skill used in marketing the crop."

BETTER THAN MANY PREPARED FOODS

Most farm gardens should contain a small plot of pop corn, in the opinion of Professor Salmon. Pop corn has considerable value as a food, and when properly prepared for the table is superior to many of the breakfast foods now on the market. The popped corn may be eaten with cream and sugar, or the unpopped, glazed kernels may be ground in a coffee mill and used the same as a breakfast food.

There are two well defined types of pop corn—the rice type, with sharp kernels, and the pearl type with smooth or rounded kernels. Each of these types may be subdivided into a number of different classes according to color, size, and time required to mature.

There is little demand for the colored varieties except as a means of decoration. Some of these have excellent popping quality and good flavor, but as the popped kernels do not completely hide the colored hull they do not make so attractive an appearance as the white varieties. The white kinds are most in favor for commercial purposes.

DECIDUOUS TREES BEST FOR STREET PLANTING

Evergreens Tend to Keep Walks Icy and Muddy in the Spring, Says State Forester

Trees that shed their leaves in the fall are the most satisfactory for street planting, in the opinion of C. A. Scott, state forester and professor of forestry in the Kansas State Agricultural college.

"Deciduous trees give shade during the season in which it is most needed," said Professor Scott, "and during the winter offer little obstruction to the direct light and heat of the sun. Evergreens, because they cast a greater amount of shade during the winter and keep the streets in an icy or muddy condition longer, are unsatisfactory street trees."

The selection of the species, the planting, and the care of street trees are matters that should come under the jurisdiction of a municipal officer, according to Professor Scott. When the planting is left to the property owners each plants his own favorite species, or any tree he can get. The result of such unsupervised planting is a mixture of all kinds and sizes of trees, of various styles of trimming,

uneven spacing, trees out of alignment, and sometimes no trees at all for considerable distances.

A number of species is desirable for several reasons. One species may be attacked by insects to which others are immune. One advantage, however, of having the trees on one street all of one kind is that a group can be sprayed or otherwise treated at the least possible cost.

Professor Scott pointed out that on the average street the distance from property line to property line may be divided on the basis of two-fifths for sidewalks and three-fifths for roadway. Residence streets are usually 50 feet wide. This width allows a 30-foot roadway and 10 feet on either side for sidewalk space which can be divided into five feet for parking, four feet for sidewalk and one foot for the sod strip between the walk and the property line. Broad strips of parking mean thrifter trees, more grass, and less dust.

SUNDAY EVENING FIRE BURNS SHEDS AND PENS

Quick Action Saves Cattle in Experimental Lots—Feeding of Animals Is Being Continued

Sheds and pens used for feeding purposes at the agricultural college were destroyed by fire Sunday evening, entailing a loss of \$3,000 and endangering 100 head of cattle which were driven from the pens before the flames reached them. The cause of the fire is not known.

Although the fire department made a quick run the sheds were ablaze from one end to the other when it arrived. No fire plugs were near and because of the intense heat, it was impossible for the firemen to use chemicals.

The cattle were divided into six lots and were being used in a feeding experiment. They have been placed in other lots and the experiment is being continued. Records were preserved.

The greatest loss was in the burning of alfalfa cut at various stages of growth. This was being used in a colt feeding experiment in which six animals were being used.

COW AND HEN SPECIAL SERVES AS EYE OPENER

Santa Fe Railway and Kansas State Agricultural College Train Draws 40,000 Persons—109 Stops

The dairy and poultry special train conducted by the Santa Fe Railway company in cooperation with the Kansas State Agricultural college between March 6 and March 31 was an unqualified success. H. M. Bainer, '00, agricultural and industrial agent for the Santa Fe, was in charge.

Nearly 40,000 persons in 109 Kansas towns listened to talks setting forth the best practices in dairying and poultry raising. Thousands of these persons are expected to increase their profits through adopting the latest methods in these branches of agriculture.

A display of four dairy cows from the college, representing as many breeds, attracted much attention, as did an exhibit of poultry furnished by farmers of the state. Canary Bell, the college Ayrshire cow which produced 17,406.4 pounds of milk containing 668.16 pounds of butter fat in one year, was one of the cows on the train.

Those who represented the agricultural college on the train for at least a part of the time were O. E. Reed, professor of dairy husbandry; J. B. Fitch, associate professor of dairying; Ross M. Sherwood, acting head of the poultry husbandry department; F. E. Fox, assistant in poultry husbandry; and A. S. Neale, assistant superintendent of institutes and specialist in dairy husbandry, division of extension.

I am not bound to win, but I am bound to be true. I am not bound to succeed, but I am bound to live up to what light I have. I must stand with anybody that stands right, stand with him while he is right and part with him when he goes wrong.—Abraham Lincoln.

FEED THE CHICKS WELL

RATION IS IMPORTANT IN MAKING POULTRY PROFITABLE

Corn, Kafir, and Feterita Are Fat Producers and Should Form Basis—Sour Milk and Water Should Be Before Birds at All Times

Feed the young chick properly and you have done much toward making the prospective chicken profitable, according to N. L. Harris, superintendent of the poultry farm, Kansas State Agricultural college.

"Sprouted oats are valuable as a feed for the newly hatched chick," said Mr. Harris, "but it is impossible to give any special ration that is best under all conditions. Several combinations have been used with much success. The one essential is to furnish all the elements necessary to build up the body of the chick. It may be easily seen that no one grain will supply all the elements necessary for the different parts of the body."

HEAT AND ENERGY REQUIRED

"A ration should contain a sufficient amount of fat producing food which will give heat and energy. Feed should be given that will produce feathers. Corn, kafir, and feterita are the most important fat producing feeds in this state and should furnish the basis for a growing ration."

"Feeds to give the growing elements are bran, shorts, alfalfa leaves, and something to take the place of bugs and worms which nature ordinarily furnished. There is nothing that so thoroughly fills the place of bugs and worms as sour milk. If possible a supply of this should be before the chicks at all times. It is preferable to feed the milk sour as the acid aids in the digestion of other feeds."

BEEF SCRAP A SUBSTITUTE

When no sour milk can be procured it will be found profitable to purchase commercial beef scrap, in the opinion of Mr. Harris. This is a by-product of the packing house and is high in the elements that go to make up muscle and tissue.

One ration which has given satisfaction at the college poultry farm is composed of 21 pounds of wheat bran, 18 pounds of corn meal, four pounds of bone meal and two pounds of commercial beef scrap increased to four pounds at the end of the second week. With this ration is given a scratch feed of equal parts of cracked wheat and cracked corn or kafir.

BABY CHICK NEEDS GRIT

As the body of a baby chick is composed of 75 per cent water a sufficient supply of good clean water should be kept before it at all times. One of the first requirements of a chick is grit. Common sand is preferable to commercial grit as it is not quite so sharp and is not inclined to irritate the delicate digestive tract.

Nature has provided within the chick sufficient food for the first 36 to 48 hours in the form of the yolk of the egg. This is absorbed just before hatching. For this reason no feed should be given for the first few hours or until the chick shows indications of being hungry.

At no time during the first two weeks should the chick be given all the feed it will eat. In order to get the best results in raising baby chicks, it is necessary to make the artificial conditions under which they are raised correspond as nearly as possible to those which would have prevailed in the wild state.

CLAPP IS SELECTED FOR AGENT IN MORRIS COUNTY

Is College Graduate and Has Had Farm and Teaching Experience

The appointment of A. L. Clapp as county agent for Morris county has been announced.

Mr. Clapp was graduated from the Kansas State Agricultural college in 1914. Since then he has had a year's experience as foreman of the agronomy farm at the college, one year as manager of a ranch in Colorado, and one year as teacher of agriculture in the high school at Castle Rock, Col. His headquarters will be at Council Grove.

HOME FOR DAIRY COW

ANIMAL NEEDS THOROUGHLY COMFORTABLE LIVING QUARTERS

Expense Incurred in Good Barn and Stalls Will Be More Than Met by Increased Financial Returns Later

The dairy cow should be provided with as comfortable a home as a human being, according to L. H. Fairchild, fellow in dairy husbandry in the Kansas State Agricultural college. This should be done not only out of a humane regard for the cow but because of future financial returns.

The best floor material for a dairy barn is cement, as it is the easiest to keep clean and the most durable. The cement should be covered with a removable wooden mat or with two inch planks. If cows lie on the cold floor udder trouble may result.

HOME MADE STALLS ALL RIGHT

A good stall should insure cleanliness and comfort. Homemade stalls can be built at little expense that will fill the requirements. The partitions between the stalls, the hay racks, and the mangers may be made of wood or metal piping. The wood is preferable because of the expense of the piping.

The partitions should slope from the front to the back of the stall and should be high enough at the back to prevent a cow that is standing from stepping on one that is lying down. The stalls should be wide enough to give ample room for the milker.

CLEANLINESS IS IMPORTANT

The manger should be built about 30 inches above the floor. Its bottom should be round. Corners should be avoided as they tend to hold dirt and leaves that shatter from the hay. On the floor across the back of the stall, a four by four may be placed, and held firm by a bolt running through it and into a slot in the cement, so that it can be moved backward and forward. The cow will soon learn to lie in front of this four by four and not on it. This will tend toward cleanliness.

The cost of a stall of this type will range from \$5 to \$8, according to the quality of materials used. The cost of a comfortable stall will be saved annually by the additional milk supply from the contented and comfortable cows.

RECOMMENDS 10 SENIORS FOR ARMY COMMISSIONS

Captain Mathews Names Candidates for Provisional Second Lieutenantcies—Many in Reserve Corps

Ten members of the class of 1917 of the Kansas State Agricultural college have been recommended to the war department as provisional second lieutenants of the army by Captain L. O. Mathews, commandant of the cadet corps.

Those recommended for provisional commissions are Walter Emil Deal, Great Bend; Charles Thomas Halbert, Agra; Henry Robert Horak, Munden; Harold Clark McClelland, Manhattan; Lewis A. Maury, San Antonio, Tex.; John R. Rathburn, Downs; Frank Richard Rawson, Wamego; Guy P. Smith, Great Bend; Thomas L. Vincent, Manhattan; and Charles Zimmerman, Stillwell. Captain Mathews also recommended for provisional commissions J. B. Mudge, '14, of Lawrence, and Paul E. Jackson, '15, of Downs.

The recommendations were made by Captain Mathews in response to a request by the war department, which is now prepared to appoint second lieutenants provisionally in accordance with the national defense act that went into effect last July.

These young men will be given a thorough course in military science after which they will be sent to some unit of the regular army for one year. After that time unless there are vacancies for them they will be placed in the reserve until needed. In case there are vacancies they will be immediately commissioned as second lieutenants in the regular army.

All 12 men who have been recommended by Captain Mathews have already received notification from the war department that they are to proceed to Fort Leavenworth April 23, and there take the preliminary examination, following which they are to take the military science course to fit them for their future duties.

Captain Mathews reports that application from the officers of the Kansas State Agricultural college cadet corps for places on the reserve officers' list, are pouring in. In case volunteers are called for this month the college will be able to furnish practically all the officers that will be required for the troops enlisted from this state.

16,000 FUTURE ENGINEERS IN LAND GRANT COLLEGES

Dean A. A. Potter Points Out Important Work Accomplished by 48 American Institutions

The 48 land grant colleges of the United States are preparing 16,000 students for the engineering professions, according to A. A. Potter, dean of engineering in the Kansas State Agricultural college and secretary of the Land Grant College Engineering association.

Dean Potter, who spoke last week at the conference on engineering cooperation held in Chicago, pointed out that the engineering students numbered more than one-third of the total enrolment in land grant institutions. The complete enrolment, according to the last figures available, was 45,000, of whom 16,000 were in engineering.

"The land grant colleges," commented Dean Potter, "have been the most potent influence in the United States in making our whole field of higher education practical and in close touch with the people."

"The spirit of cooperation is greatly emphasized in the ideals of land grant institutions. The three activities of these institutions include engineering and agricultural education, extension work, and research. These institutions were the pioneers in industrial education and welcomed the introduction of this form of education in state and private institutions."

Professor Potter traced the history of research in land grant colleges, discussing the Hatch and Adams acts for the support of agricultural experiment stations. For the last 12 years, he showed, an effort has been in progress to secure federal aid for engineering experiment stations. This was stimulated by the European war. The matter was embodied in the Newlands senate bill, which was defeated, however, at the last session of congress.

FORM JERSEY CALF CLUBS IN SOUTHEASTERN KANSAS

Boys and Girls Undertake Work Under Direction of District Agent

C. G. Elling, district agent in southeast Kansas, has undertaken the organization of several Jersey calf clubs and has met with remarkable encouragement. In one instance a girls' Jersey calf club has been formed in the trading radius of Parsons.

In addition to this movement it is planned, in cooperation with the Labette county bankers, to place 125 calves with boys and girls throughout the county. The Oswego trade territory has already 75 boys who have signed up for this work.

In this work each contestant must keep a record of the amount of milk given daily and at least two tests must be made a year, and a record kept of the products sold. Each contestant must write a short story of the calf at least twice a year and send it to Mr. Elling at Parsons. In this contest care and management, including profit and condition of the calf, count 50 per cent; written essays and records, 30 per cent; promptness in attending to business with bank and sending in reports, 10 per cent; and the final showing 10 per cent.

About 10,600,000 head of live stock will be pastured in the national forests during the coming season.

BEAN CROP WILL PAY

FARMERS SHOULD RAISE ENOUGH FOR HOME CONSUMPTION

At Present Prices Yields of 300 Pounds an Acre, as Secured at Tribune Station, Will Pay the Grower Well

That in consideration of the present high prices it will pay to plant beans this season, is the opinion of G. E. Thompson, specialist in crops, division of extension, Kansas State Agricultural college.

All farmers are advised to grow enough beans for home use, and it will be well for those who have had experience in raising beans to plant a small field of them for commercial purposes, believes Mr. Thompson. Inquiries have been received at the college relative to the planting of Mexican, pinto, and tepary beans in Kansas.

STAND DRY WEATHER WELL

Mexican beans stand dry weather well and in the extreme western and southwestern part of the state many farmers have raised small fields of them with good results, pointed out Mr. Thompson. Yields in excess of 300 pounds an acre have been recorded at the Tribune station in Greeley county. Three hundred pounds will pay well at the present prices.

"Pinto" is the trade name for a variety of the Mexican bean which sells best on the eastern markets. It has small, elongated light brown spots which give it a finely striped appearance. If Mexican beans are to be grown the pinto is the best variety.

MEXICAN EXCELS TEPARY BEAN

The tepary—a small white bean—which is native to the southwestern portion of the United States and which has been grown by Indians in Arizona for a good many years, is considered a good crop for drouthy conditions. This bean has a strong flavor and for this reason is not so marketable as some other varieties.

The tepary bean has been grown only to a limited extent in western Kansas, but in the four years in which trials have been made at the experiment farm it did not prove the equal of the Mexican bean.

SWISS CHARD WILL GROW EVEN WHEN WEATHER'S AGAINST IT

Leaves May Be Used for Greens—Stalks May Be Served Like Asparagus

Plant some Swiss chard this season. It will grow under unfavorable climatic conditions and the leaves will remain tender throughout the season.

Swiss chard is a form of the beet, the foliage developing more prominently than the roots. The wrinkled leaves may be used as greens or the hard stalks may be cooked and served like asparagus. Chard has as much food value as spinach and tastes much the same. It is more easily prepared for the table, for the leaves are large and easily cleaned.

Seeds should be sown any time in the early spring and in the same way as beets, points out M. F. Ahearn, professor of landscape gardening in the Kansas State Agricultural college. The rows should be at least 16 inches apart. The seedlings may be thinned out from six to eight inches apart as soon as they are large enough for greens.

Cutting off the tops of the plants does not stop the growth. Repeatedly, new leaves will be produced. If a surplus of chard is grown it may be used as chicken feed as it is relished by the birds.

PROFITS ARE INCREASED BY DESTROYING HOG PARASITE

Dr. R. R. Dykstra Tells How to Eradicate Worm that Reduces Meat Production

Importance of increasing profits in hog raising by eradicating the parasitic hog worm is emphasized by Dr. R. R. Dykstra, professor of surgery in the Kansas State Agricultural college.

Many inquiries are being received by the college from Kansas farmers as to the best means of combating

this pest, which saps its food from the animal and thus reduces the meat production and makes the hog more susceptible to disease.

The hog should be starved for 18 hours and then fed 2½ grains of santonin, one half grain of calomel, one half dram of powdered areca nuts and one dram of bicarbonate of soda to 100 pounds of live hog weight. These substances should be administered in the feed or slop. In this way each hog gets an equal portion.

The animals should be kept confined in pens so that the feces and expelled worms may be collected for a period of 48 hours after the medicine has been given. If such feces are not gathered up the animals will reinfest themselves by rooting around in the filth. All excreta should be burned.

It is advisable to repeat the treatment in about 10 days as it is possible that all the eggs of worms are not removed by the first treatment. In 10 days they will have hatched, and the second treatment completes a cure.

TRAPPING IS BEST WAY TO GET RID OF MOLES

Not These Animals, but Their Uninvited Guests, Eat Seeds and Roots—Mice May Be Poisoned

The best method of getting rid of moles is by trapping, according to Dr. Lee R. Dice, instructor in zoölogy in the Kansas State Agricultural college.

"While the mole disfigures lawns and parks by throwing up unsightly ridges and tears up roots of flowers and vegetables, he does not eat roots, tubers, or seeds, as is often supposed," said Doctor Dice.

"The destruction of roots and seeds is the work of his uninvited guests—meadow mice, field mice, and common house mice. These little animals take advantage of the mole's tunnels to procure roots and seeds as food. The mole lives almost entirely on insects, grubs, and worms found in the soil. This frees him from the charge of eating seeds."

A number of traps are on the market which can be used to eliminate this animal from gardens, lawns, and parks. Shrewdness on the part of the trapper and some knowledge of the mole's habits are essential to the successful removal of this wary little pest. When the burrows have been crushed in by tramping, or other means, the mole reopens them by throwing up dirt from below. This action is made use of in the construction of some traps, which are so contrived that when an effort is made to reopen the tunnel, closed by tramping, the trap is sprung.

Mice, which do the real damage often credited to moles, can be poisoned by placing poisoned grain in the burrows. The agricultural college sends out, at cost, a prepared poison—strychnine in a solution of syrup—which can be used on shelled corn or other grains softened by soaking in hot water.

RUSSIAN THISTLE NO HARDER TO FIGHT THAN OTHER WEEDS

Land Worked Early and Thoroughly Seldom Gives Trouble, Says Crop Specialist

The Russian thistle can be combated as easily as ordinary annual weeds, in the opinion of G. E. Thompson, specialist in soils and crops in the Kansas State Agricultural college.

Land worked early and thoroughly seldom gives trouble when planted to some cultivated crop. The weed should never be allowed to go to seed. The thistle is more harmful than the ordinary weed because it is drouth resistant and thrives when many other weeds are dead.

If left to stand after a small grain crop has been harvested, the Russian thistle decreases the moisture in the ground and leaves it in poor condition for seeding fall wheat. This pest does not ordinarily give trouble in pastures that are not overgrazed.

Waldo F. Heppé, who has been referred to as a student in agronomy, is a senior in animal husbandry. The error is due to an incorrect entry in the students' directory.

TO MAKE ALFALFA GROW

RENOVATION OFTEN HELPS IT UNDER ADVERSE CONDITIONS

For Early Weeds, Operation Should Be Performed Before Plants High Enough to Be Injured—Summer and Fall Best Under Other Conditions

Renovation of alfalfa has proved to be one means of making its culture possible under conditions which otherwise would not favor its growth, states Ralph Kenney, assistant professor of agronomy in the Kansas State Agricultural college.

For weeds which make their appearance early in the spring and thus take the first crop, renovation should come before the first growth of alfalfa is high enough to be injured.

RENOVATION AFTER CUTTING

The most common time for renovation, however, is after the first hay crop has been removed. Most of the weeds and annual grasses likely to compete with the alfalfa stems are just sprouting at this time. If not killed then, these weeds probably will grow to maturity. Occasionally it is found profitable to renovate after each hay crop of the season.

In parts of the country where grasshoppers are a pest during certain parts of the season, it is profitable to renovate in the fall after the hopper eggs have been deposited. Such renovation exposes the eggs to freezing and other disadvantages.

BLUE GRASS SMOTHERS ALFALFA

In other parts of the state, where Kentucky blue grass grows naturally, and becomes a menace to the crop, alfalfa must be renovated to prevent its being smothered by this grass. Even this method fails to stop the blue grass after four or five years and the alfalfa must be plowed up.

Under certain soil conditions, it is essential to cultivate alfalfa, and as large a profit may be obtained as through the cultivation of corn or other rowed crops. The soils, however, which readily take up moisture, even though they have not been stirred for several years, are not benefited so much by renovation. There are, moreover, hundreds of farmers on the prairie soils of Kansas who will not find it profitable to renovate at any time.

HORSE COLLARS MUST FIT TO AVOID SORE SHOULDERS

Animal's Skin Should Be Bathed Frequently During Summer Months, Says Animal Husbandry Specialist

Shoulders of many horses become sore in the spring season because of poorly fitting collars. This annoyance can be avoided if a little care is exercised.

"Sore shoulders ordinarily are the result of friction," said Dr. C. W. McCampbell, associate professor of animal husbandry in the Kansas State Agricultural college. "Horses that have been idle during the winter usually begin spring work with their shoulders full and plump. The collars selected may fit well at first, but as work progresses, the muscles begin to shrink and grow more firm, and as a result the collars become loose and friction on many parts of the shoulder follows."

"A properly fitted collar will not rub any part of the shoulder. Collars should fit snugly on top and on the sides. Most collars stand away too far from the side of the neck. At the bottom of the collar there should be enough space to allow the hand to be run between the neck and collar."

The skin of the shoulders may be toughened by bathing it frequently with cold salt water, or water to which a small amount of vinegar has been added. This should never be done, however, just before the horse is put to work.

It is a good plan during the hot summer months to remove the collar at noon and bathe the neck freely. The neck should be bathed again at night as soon as the collar is removed. The collar should be thoroughly cleaned every time it is put on a horse's neck. The surface should be kept as hard and as smooth as possible.

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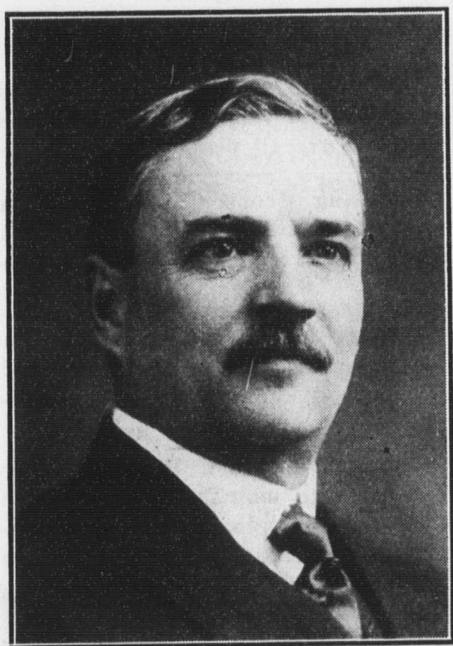
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NEW USE FOR BREWERY

CLOSE SALOON AND UTILIZE GRAIN AND LABOR PRODUCTIVELY

Dr. Henry J. Waters Would Conserve Nation's Resources in Preparedness Plan by Eliminating Economic Waste—Speaks at St. Louis

Shut down the breweries and distilleries, close the saloons, and utilize the grain and labor productively was the constructive preparedness note in the address of Dr. Henry Jackson Waters, president of the Kansas State Agricultural college, before the conference at St. Louis, called by Secretary Houston of the United States



DR. HENRY JACKSON WATERS

department of agriculture to consider the food situation of the nation.

"We face the problem of very soon supporting two million men in army camps," said President Waters. "We must also feed our own people at home while they produce munitions and equipment for our soldiers and those of our allies, and we must also assist in supplying our allies with food."

"We are entering upon one of the greatest of wars without any reserve of food. Germany spent years in accumulating a food reserve to prepare herself for this emergency. This country's visible supply of food, however, will be consumed before another harvest. If we should have an unfavorable season, this country will face the greatest food shortage it has had since the Civil war. We must therefore immediately proceed to increase our food output and to practice the most rigid economy in the consumption of products already produced."

SHOULD GROW MORE BEANS

"Since the American soldier lives on hard tack, pork, and beans, we must increase at once these army necessities. We must increase the bean acreage this year. In the north and west we can grow a larger acreage of the navy bean, and in the south and west of the Mexican and Tepary bean."

"We must increase our pork production by breeding all the sows for fall litters and holding a reserve of corn to winter and fit the new output for the spring market."

"We must increase our bread supply by milling all our wheat to 81 per cent flour instead of 73 per cent, as at present. In this way we can increase our flour output 18 million barrels on our present production, thus increasing the bread-carrying capacity of this country by 12 million people. This is the only way we can increase this season's bread supply."

ENORMOUS ANNUAL SAVING

"Such an increase in the bread supply will occasion a corresponding decrease in stock feed supplies. On the other hand, a large saving in grain suitable for fattening live stock can be

made by shutting down the breweries and distilleries. By closing the saloons and shutting down the breweries and distilleries of the country, we would save annually 618,508,095 bushels of grain.

"We would release for productive labor 101,755 laborers now engaged in manufacturing liquor, 17,736 retail dealers and perhaps twice as many bartenders now employed in the liquor business. We would also release others connected with the traffic, such as the policemen, constables, and other officers, the penitentiary guards, and the attendants of our hospitals and almshouses. Even large numbers of our doctors could then be spared to care for the sick and wounded in the army."

"In addition to all this, the equipment of our breweries and distilleries could be put to work to manufacture munitions, to refine fuel oil for farm tractors, and even to can fruits and vegetables. Considerable labor could also be utilized to help make up the farm labor shortage, thus lightening the greatest difficulty in the way of a permanent increase in the national food supply."

FAVORS CANNING SURPLUS

Increased gardening, rapid extension of community canning clubs to can the fruit and vegetable surplus, and the encouragement of a greatly increased potato acreage, were among other food conservation measures advocated by President Waters.

"Kansas is likely to have less than the normal acreage of potatoes because of the high cost of seed potatoes," he said, "and hence there should be devised at once some means of assisting the farmers to obtain their seed product."

"The possibilities of canning the surplus fruit and vegetable product may be shown in the work of the Glenwood canning club in Leavenworth county, Kansas. This club of 60 members this last season canned a surplus fruit and vegetable product of 11,000 quarts, or more than 16 tons of prepared food products."

"The United States can meet the emergency before her only by directing her labor into the most productive channels and by applying her intelligence to the proper production and conservation of her food supply."

MANY CHANGES ARE MADE IN COLLEGE CADET CORPS

Appointment of F. M. Pickrell as Colonel Is Announced

F. M. Pickrell of Manhattan, senior in dairy husbandry, has been appointed colonel of the cadet corps of the Kansas State Agricultural college, succeeding J. B. Sweet, who finished his school work last term.

Mr. Pickrell is president of the Rifle club; captain of Scabbard and Blade, national military organization; member of Gamma Sigma Delta, honorary agricultural fraternity; Apollo club; Athenian Literary society; and the Shamrock club.

Other promotions are E. F. Whedon of Oswego and J. E. Williamson of Topeka as captains; R. V. Morrison of Sterling, J. A. White of Willis, C. M. Barringer and M. W. Converse of Manhattan, S. M. Mitchell of Kansas City, O. W. Reed of Norton, and L. Vorhies of Alva Woods, Okla., as first lieutenants.

The new second lieutenants are C. L. Bower, Mound City; C. Neiswender, Manhattan; H. J. Henney, Baldwin; W. W. Fetrow, Haddam; B. B. Brewer, Manhattan; E. T. Wheatley, Dodge City; T. Yost, LaCrosse; A. W. Foster, Fairchild, Wis.; F. H. Dodge, Manhattan; J. J. Black, Carterville, Mo.; Homer Cross, Wichita; Rex Criswell, Hardtner; G. F. Hicks, Norton; and S. Marshall, Manhattan.

FOR GLORY OF COUNTRY

AMERICAN PEOPLE SHOULD UNITE IN COMMON CAUSE

E. W. Hoch Makes Patriotic Address at Big Mass Meeting in Auditorium—Local Red Cross Chapter Is Organized

That regardless of country of birth every man and woman in America should put aside differences of opinion and unite in a common cause, was the declaration of E. W. Hoch, member of the board of administration and former governor of Kansas, in speaking at a patriotic mass meeting of students and citizens in the college auditorium Monday night.

"We have invited all nations to come to our shores," said Mr. Hoch, "and it is perfectly natural that they should have differences of opinion. The difference between an autocracy and a democracy is that in one there is the right of opinion and in the other there is not."

"There is no longer a place for difference. Every American citizen should help 'lick' Germany. There must be no Democrats or Republicans—every man must be an American."

WORLD IS GROWING BETTER

"I believe this world is growing better despite what on the face of things appear to be evidences to the contrary. This is the most atrocious war in the history of the world, but permit me to believe that it spells the doom of the thing we call royalty. A lot of kings, emperors, and kaisers have got to come down—have to quit business. Out of this war is coming a federation of republics. The principle of the fatherhood of God and the brotherhood of man will prevail."

"I believe that the war spells the doom of the liquor traffic in the world. Nations have learned that they can't win wars with drunken soldiers. Reverence will prevail for the God of the universe. It will teach the world of the foolishness of settling any kind of dispute by force."

MEETING IS WELL ATTENDED

Three thousand persons crowded into the auditorium. The meeting was the culmination of a patriotic demonstration which started down town at 7:15 o'clock in the form of a parade. Those in line included students, faculty members, old soldiers, sons of veterans, boy scouts, and citizens in general. The parade was headed by the college band.

Dan Casement, prominent ranchman, presided at the auditorium meeting. Major C. P. Robbins of the United States army medical corps, stationed at Fort Riley, explained the American Red Cross work. Miss Loula E. Kennedy, instructor in domestic science, and Miss Ann R. Cahoon, assistant professor of physical education, spoke briefly. Mrs. G. E. Thompson recited a patriotic poem.

The closing feature of the meeting was the organization of a local chapter of the American Red Cross. Officers elected were B. W. Smith, president; Mrs. W. A. Cochel, vice president; W. R. Yenawine, secretary; and Carl Floersch, treasurer.

STUDENTS IN DOMESTIC ART LEARN TO KNIT BANDAGES

Domestic Art Department Starts Campaign of Usefulness

Domestic art students of the Kansas State Agricultural college will be taught to knit as one step toward preparedness.

The students who cannot turn the heel and toe of a sock will learn the process. Knitting will include the making of bandages, surgical sponges, and chest protectors. The department of domestic art has written to the Red

Cross association in order to ascertain the immediate needs.

A conference of instructors was held to discuss the need of greater economy in the use of textiles in the United States, and particularly in the Kansas State Agricultural college. This might be done, it was pointed out, by a more general use of cotton goods in place of silk nonessentials such as underwear, hose, and crepe de chine handkerchiefs; by simplified or uniform dress; preservation of clothing through care, renovation, and remodeling; preservation of all old clothing such as cotton cloth for hospital use and wool to be rewoolen for army use; by saving old rubber and leather; and by using composition soles and cloth tops for shoes. Another suggestion was that knitting be taught in the schools throughout the country.

Statistics were read by Miss Mildred French, in charge of domestic art in the school of agriculture, showing the great need in this country for a campaign such as is being started at the agricultural college.

DIVISION OF EXTENSION HAS NEW VETERINARIAN

Dr. George M. Potter of United States Department of Agriculture Is on Staff of Workers

Mr. George M. Potter of the bureau of animal industry, United States department of agriculture, has been appointed by the board of administration specialist in veterinary medicine in the division of extension in the Kansas State Agricultural college. He will conduct extension work in veterinary medicine with special reference to hog cholera and contagious abortion.

Doctor Potter is 35 years old. He was brought up on a farm and was graduated from the veterinary college of the Ohio State university in 1906. Since then he has been connected with the bureau of animal industry of the United States department of agriculture. He has had wide experience throughout the United States in tubercular testing, meat inspection, the manufacture of blackleg vaccine, and in the study of contagious abortion.

Doctor Potter has three years' experience in teaching veterinary subjects in George Washington university and Ohio State university. He is the author of several bulletins, one of the most recent of which is a farmers' bulletin on contagious abortion. Doctor Potter is expected to assume his duties at the college May 1.

SERVICES OF COLLEGE BAND ARE TENDERED GOVERNMENT

Organization Under B. H. Ozment Ready for Service

The services of a 28 piece band under B. H. Ozment, band leader, have been tendered the war department by Capt. L. O. Mathews, commandant of the Kansas State Agricultural college cadet corps.

If the offer is accepted it is expected that the band will be under orders as soon as a call for men is made.

COLLEGE CADET CORPS IS AT BEST FOR ANNUAL INSPECTION

Students Hope to Bring Honor to this Institution

The annual inspection of the college cadet corps was held at the agricultural college Tuesday. Colonel Julius R. Penn was the army officer in charge of this work.

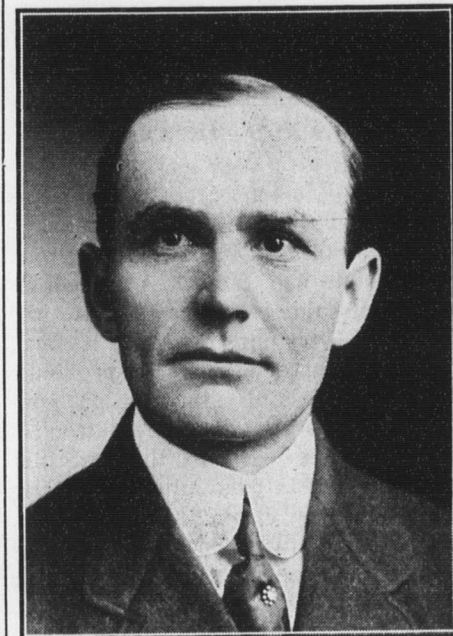
For the last three years the college has won the title of "distinguished institution" in military drill. The students have been drilling with the idea of bringing this honor to the college again this year.

MORE FOOD IS NEEDED

PATRIOTISM OF INCREASED PRODUCTION DEMANDED BY NATION

Dr. W. M. Jardine Makes Timely Suggestions at St. Louis Meeting Relative to War Time Necessity for Greater Yields

"If our armies are to succeed we must back up the patriotism of the soldier by the patriotism of increased production," declared W. M. Jardine, dean of the division of agriculture in the Kansas State Agricultural college, in an address before the conference of national leaders in St. Louis Monday, called by Secretary Houston to



DR. W. M. JARDINE

consider the conservation of the nation's food supply.

"We are producing more food products than we are using," said Dean Jardine, "because as yet no scheme has been put in operation comprehensive enough to conserve all our commodities from the period of surplus to that of shortage. We must immediately enter upon a plan to utilize to the best advantage our total staple grain, beef, pork, dairy, poultry, garden, and orchard products."

PLANT LARGE WHEAT ACREAGE

"We must get ready now for the planting of a large wheat acreage next fall. Kansas seeded 8½ million acres of wheat last fall. Drouth conditions have already made nearly three million acres worthless. This land must be planted to corn and grain sorghums in such a way as to leave it in the best shape for wheat this coming fall. If the corn is planted in rows seven feet apart instead of 3½ feet, according to experiments carried on at the Fort Hays Branch Experiment station, the ground will produce a maximum yield and will still be left in the best possible shape for the production of wheat."

"There is yet plenty of time to increase this season's corn yield. This can be done by the selection of good seed and by the proper preparation of the ground for planting."

"We have been negligent in the conservation of our meat supply. Last year we lost 200,000 hogs or \$3,000,000 worth of pork in Kansas from cholera alone, a disease that can be absolutely controlled by proper coöperation."

"By giving the dairy cows better care and feed it is possible to increase the total dairy product from 10 to 25 per cent. Better feed for dairy cattle might be secured by the proper coöperation of the owners of the mills, elevators, and feed stores in the preparation of properly balanced grain rations. Such coöperation would have an immediate effect in increased dairy products."

(Concluded on Page Four)

THE KANSAS INDUSTRIALIST

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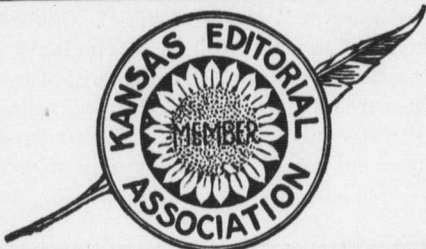
H. J. WATERS, PRESIDENT.....Editor-in-Chief
N. A. CRAWFORD.....Managing Editor
J. D. WALTERS.....Local Editor
ADA RICE, '05, M. S. '12.....Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

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WEDNESDAY, APRIL 11, 1917

KANSAS AND PREPAREDNESS

A country of such territorial vastness and such variety of resources as the United States will have incalculable advantages in the present war. Each state will doubtless furnish its quota of soldiers, but each state will have a further part, specially its own, to play in the conflict. To prosecute the war successfully, the national government will need the coöperation of all the states—each in the activities for which it is particularly fitted—in supplying resources as well as men. One state will furnish chiefly food products, another munitions, another clothing, another money, and so on.

To Kansas the nation will look primarily for food. Kansas is predominantly an agricultural state. Moreover, it is a progressive agricultural state. Modern science and modern business have made their mark on Kansas agriculture. Consequently, the nation will expect much from Kansas.

Kansas will not disappoint the nation's expectations. The people of Kansas are united in loyalty and patriotism. The general sobriety of the people keeps Kansas above par in industrial efficiency. Farmers will use the best methods of preparation and cultivation. They will plant the crops most likely to yield large returns in food for the nation. Bankers will lend money for the betterment of agriculture. City folks will put in gardens in every available space—and there is much available space in the average city or town. Everyone in the state will use food and food products economically for the greater good of the nation. In these ways Kansas will do its special part toward the security and success of the United States in the great war.

PER DAY—\$100

Certainly very few farmers would neglect an opportunity to make \$100 by a day's work—yet a good many farmers that do not test their seed corn, that do not remove the grains on the butts and tips of ears, that do not grade their seed corn with a good grader, and that do not adjust the planter until it drops evenly, could make more than \$100 by doing these things and they could do them all in one day.—Illinois Farmer.

POSSIBILITIES

This is the season of possibilities. The spring time brings dreams and hopes and anticipations; the autumn brings harvests and results and realizations. The idea must go ahead of action. Before we do a worthy or unworthy deed we must decide in our minds to do it, or do it under the suggestion or compulsion of some one else.

For the farmer the spring time is the foundation period of the entire

season. It is at this time that things are planned and being started that will occupy us until snow flies next fall, and possibly thereafter. The success of the season's work depends very largely on the way that our plans are matured and carried out. On the thoroughness with which this year's corn land is covered with manure and the timeliness and thoroughness of its preparation will rest the future of the crop, and the extent of next winter's feeding operations. On the care with which the scion is set in the stock this spring will rest the fruit crop of the tree a few seasons hence. On the care with which the seed has been selected and tested for germination will rest the perfect or partial stand. The quality of the potato crop will depend largely on whether or not clean seed stock has been saved or bought and whether or not it is treated before planting to prevent scab and other destructive diseases. On the thoroughness of the early spring spraying will depend the quality of the fruit crop. On the care and attention at foaling time will depend the life and health of many colts. On proper housing and feeding for the sow will depend the size of many litters of pigs. One pig lost by neglect now might represent a good many dollars next fall. It is a time for care and thought and action. There are great responsibilities in the spring time and "preparedness" is the word. One generally knows what he may expect and it is only business to be ready to meet a contingency that is fairly certain to present itself. Plans well laid and carried out are the foundation for success in farming.—Ohio Farmer.

RESOURCES IN DRY FARMING

Of utmost importance to the dry farmer is a full realization of the supplemental use of the various resources available to him, no one of which is adequate by itself to a successful solution of his problem of making a living from the land. To explain my meaning—the stockman relying upon the grazing range alone is subject to disaster by drought; the dry farmer relying upon rainfall alone will likewise often fail through want of a timely and adequate water supply; the pump irrigator alone will fail because he cannot afford the cost of his pumped water supply. But upon the combined resources of the grazing range, the dry farmer, and the irrigator, a scheme of agriculture can be built up that combines all of their advantages and avoids the disaster almost certainly resulting from dependence upon any one of these alone. The grazing range, for instance, with its rich burden of green feed during the rainy season, supplements the dry farmer's silo; and the water supplied by the pump irrigator at times when water must be had to start or save a crop, supplements the rainfall upon which the dry farmer may mainly rely. This coöperation between cheap range feed, timely dry farm forage supply available as silage, and pumped or stored water supplies used in time of need, together with a scheme of live stock adapted to the particular situations of the dry farmer, points the way towards the utilization of hundreds of thousands of acres of lands in a region of which it was formerly said that it could only be farmed by means of a copious irrigating water supply. At altitudes of 4,000 feet and below, the problem is more severe. At altitudes of 4,000 to 7,000 feet, where conditions are more mild, the problem is more easy of solution; but the developments of the last ten years indicate clearly a considerable future for an agriculture in this region founded mainly upon the ideas mentioned above—the most effective possible use of rainfall; quick growing, drought-resistant crops; silos; live stock; and the skilful supplementary use of grazing range, dry farming, and irrigating resources available within the region.—Dr. R. H. Forbes in the Agricultural Review.

ILLINOIS HALL OF FAME

Some eight or nine years ago, someone connected with the Illinois Agricultural college conceived the idea

that it would be a nice thing to establish there a hall of fame, in which from time to time should be hung portraits of men who had rendered distinguished service to Illinois agriculture, and tablets telling in a brief way of the character of this service.

This idea crystallized into action, and in 1909 was hung the first of these portraits, that of Silas Hall McCormick, the inventor of the reaper. In 1911, the portrait of James M. Brown was hung. He was the organizer and the first president of the Illinois State fair. The portraits since hung have been as follows: 1912, Jonathan B. Turner, originator of the idea which resulted in the establishment of agricultural colleges and libraries; 1913, Isaac Funk, pioneer farmer and seed culturist; 1914, Philip D. Armour, leading spirit of his time in developing central markets for live stock; 1916, Benjamin F. Harris,

Professor Rain lectures this evening at the postponed meeting of the Riley County Teachers' association at Riley.

H. C. Leonard, representing the Kansas Newspaper Union, visited the college this morning for the first time.

The regents meet on Tuesday next at 3 o'clock p. m. for the annual election of officers and other important business.

Out of respect for the memory of their fellow member, Fred S. Little, the Webster society will hold no session this evening.

Miss Marie B. Senn, '90, has entered upon special study at this college after completing a successful term of teaching in Dickinson county.

President Fairchild spent a few hours in Kansas City Monday morning, where he purchased the 2,200 panes of

An Agricultural Clearing House

Dr. Henry Jackson Waters

IN no other country is the farm paper so generally circulated or so carefully read as in the United States. The country whose people make the widest use of the agricultural press next to ours is Great Britain, but in that country there is only one paper circulated for every two farm families, while in the United States there are nearly two papers for every farm.

It is through the medium of the farm paper, more than through all others combined, that the American farmer learns how to apply to his practice the results of the discoveries of science, the inventions of the world, and the experiences of his neighbor farmer. The farm paper is doing more than this: it is helping the farmer and his family to hold his calling in higher esteem than ever before.

We may wonder at times if we haven't too many agricultural papers, but we may as well ask ourselves if we haven't too many churches or too many schools, for the farm paper is a necessary part of the large program which these institutions are helping to carry out.

pioneer Illinois farmer and live stock breeder.

On January 21, 1917, there was added to these portraits that of William Parlin, the pioneer manufacturer of agricultural implements, and for half a century a leader in the development of labor-saving machinery. Mr. Parlin was the senior member of the Parlin-Orendorff company, a firm which has now been in existence 75 years. Mr. Parlin was born in Massachusetts, January 21, 1817. He went to Illinois in 1840, and in 1842, in a small way, began the manufacture of plows. In 1852, W. J. Orendorff, his brother-in-law, entered into partnership with him. Mr. Parlin's death occurred January 25, 1891, and Mr. Orendorff died as the result of an accident, in 1897. The firm is still continued under the same name, by the sons of the original members, William H. Parlin and U. G. Orendorff.

These pioneer manufacturers of agricultural machinery rendered a service to the development of the west which can hardly be measured. Mr. Parlin, for example, was one of the very first men to make a steel plow which would work satisfactorily in Illinois prairie soil. He made the first corn stalk cutter, and we think the first disk harrow. He was an inventive genius, and many of the improvements to agricultural machinery are due to his fertile brain. The Illinois Agricultural college honors herself and Illinois agriculture in preserving in oil and bronze the memories of such men.—Wallace's Farmer.

A QUARTER CENTURY AGO

Items from The Industrialist of April 9, 1892

G. E. Hopper, '84, is putting in a system of wells for the Blue Rapids waterworks.

D. W. Working, '88, has been promoted from lecturer to master of the Colorado State grange.

Professor White conducts the general history exercise at the meeting of county teachers at Riley today.

glass needed to repair the damages from Sunday's hail storm.

W. W. Hutto, '91, and E. M. Hutto, student in 1883-'84, have been prospecting in Oklahoma recently. They report F. A. Hutto, '85, to be succeeding as a lawyer at Stillwater.

Speakers for commencement day have been chosen. The lot falls on the following members of the class: Miss Effie Gilstrap, C. P. Hartley, R. A. McIlvaine, D. H. Otis, I. B. Parker, H. Darnell, L. C. Criner, R. S. Reed. More than 2,200 panes of glass were broken in buildings and greenhouses by the hail storm of Sunday. The glaziers have been busy all the week in repairing damages, and several days will yet be required to finish the work.

Ex-Regent Caraway is, it is said, a candidate for secretary of state. THE INDUSTRIALIST doesn't dabble in politics, but would record Mr. Caraway's election with all the pleasure it gives a non-partisan to see a worthy person in a place of public trust.

The chapel lecture yesterday afternoon by Professor Lantz was an interesting paper on matters astronomical, illustrated by numerous lantern pictures of the sun and its attendant planets, with their satellites, the moon, and the earth from a photograph of Vesuvius. The failure of the light near the conclusion of the lecture left many of the more interesting views unshown.

Papers by graduates of this college are read today at the meeting of Riley county teachers as follows: "Incentives to Study and Good Conduct," J. W. Bayles, '89; "A Teacher's Requisites for Good Government," S. C. Harner, '90; "Life and Work of Froebel," Delpha Hoop, '91; "The Bright and the Dull Pupil," Miss Lillian St. John, '91. The names of Miss Bertha Kimball, '90, Miss Ada Rice, Miss Anna Reece, Miss Mima Carey, and William McIlvaine, former students, are on the program for discussions.

LET THE FLAG WAVE

Clinton Scollard in the New York Sun

Let the flag wave! Aye, let it wave on high,
Its red and white and blue against the sky!
From crest and casement, broad and bright and brave,
Let the flag wave!

Let the flag wave! Aye, let it wave above
The hills and valleys of the land we love,
And o'er the sea, to no mad tyrant slave,
Let the flag wave!

Let the flag wave! Aye, let its glory shine!
Let the flag wave, a symbol and a sign!
To guard our honor and to shield and save,
Let the flag wave!

Let the flag wave! Aye, wave in all men's sight,
Its stars unsullied as the stars of night;
Its stripes unblemished; only this we crave—
Let the flag wave!

SUNFLOWERS

Unless they makem shorter, we are going to have very little faith in the woman's overall propaganda.

Speaking of conservation, just think what might be done with the time and energy spent on auction bridge activities.

We have a great deal of respect for the advertiser who doesn't use Old Glory to draw attention to his bargains.

Those people in Chicago who are rushing into matrimony in order to escape conscription may be paraphrasing General Sherman before long.

It will be quite a relief when we settle down from the hip-hip-hooray type of loyalty to the kind that calls for an expenditure of something besides breath.

Now that William Jennings Bryan and Jess Willard have offered to serve as privates we are thinking of sacrificing ourselves on the altar of a brigadier generalship.

POLITENESS PAYS

We have dim recollections that in our youth somebody tried to teach us a little poem beginning:

"Politeness is the golden key
That unlocks every door for me."
Politeness has slowly been winning its way around the world outside of social and diplomatic circles. Business men, salespeople, and many others supposed to scorn such a gentle habit as that of politeness, have tried it and proved its value in their own success. And now politeness has invaded that last stronghold of indifference—an electric railway system. No, this is not in Erie.

The line so seriously affected is the Queens County Electric railway, New York. The company started a politeness school that has cost it \$2,500 to date. But the attorney of the road, who is also on the politeness faculty, says it pays. So far about 650 employes of the road have received an average of three lessons each in politeness. Special emphasis has been laid on imparting the gentle art to conductors.

Results? They are numerous. In the first place there has been a distinct falling off in accidents in the last few weeks. This one factor is rapidly paying that \$2,500 initial expense in teaching politeness. Complaints have fallen off, too.

But there is yet more. The company stands a chance of making a little money on the side. Numerous moving picture concerns are said to be clamoring for a chance to put on the screen a real, live, polite conductor helping a woman with several children and a bundle or so besides off or on the car. Who wouldn't be polite for a chance to get in the "movies!"—Erie (Pa.) Dispatch.

AMONG THE ALUMNI

Willard Lyness, '16, is visiting friends in Manhattan this week.

Miss Sarah Marty, '16, visited friends at the college the first part of the week.

Paul Robinson, '16, is teaching agriculture and physics in the Formosa high school.

Miss Emma Doll, '98, who has been taking graduate work, will not attend college spring term.

William C. Baxter, '13, and Mrs. Hope (Palmer) Baxter, '10, were campus visitors last Thursday.

Miss Eva Pease, '15, reports that the schoolhouse at Attica, where she is teaching, burned down last week.

Miss Ruth Aimen, '14, is one of three teachers in the department of domestic science in the Faribault (Minn.) high school.

Miss Katherine Adams, '14, spent the week end in Manhattan. She is teaching home economics in the high school at Ellsworth.

Mrs. Emma (Knostrman) Huse, '80, who recently underwent an operation in the Mayo Brothers' hospital at Rochester, Minn., has returned home and is much improved in health.

Ray Anderson, '11, is attending McCormick Theological seminary in Chicago. He will finish his post graduate work this spring and will probably locate somewhere in Kansas.

Don B. Whelan, '14, is now state entomologist of Michigan. He is located at East Lansing, Mich., and averages 2,000 miles of travel every month, giving lectures on various insect pests.

Miss Hazel Myers, '12, head of the department of home economics in Nickerson college, writes that she is looking forward with much pleasure to the reunion of the 1912 class commencement week.

R. H. Whitenack, '16, returned this week from New York state where he purchased 25 head of Ayrshire cattle. He intends to go into the dairy business in partnership with G. F. Wagner, '99, on Mr. Wagner's farm north of Manhattan.

T. K. Vincent, '16, who has been at work since graduation last June in the International Harvester company shops at Milwaukee, has now returned to Manhattan. He will continue to work for the company, with headquarters at Manhattan and Topeka.

Marion Wadley, '16, who has been taking graduate work in the department of entomology, has received an appointment as assistant entomologist in the bureau of entomology in the United States department of agriculture. Mr. Wadley has been engaged in government entomological work for the past two summers. He will take up his new position April 15.

Archie L. Marble, '15, writes to be placed on THE INDUSTRIALIST list. He is teaching agriculture in Wenatchee, Wash. He says: "On a coast trip with my basket ball team a short time ago, I ran on to Pauline Clarke at Mt. Vernon, and we had a review of all we both knew of Kansas State Agricultural college affairs. She likes the west as well as every one else who comes out here. I have been very glad to hear of the college's successes in athletics this year."

W. P. Shuler, '10, assistant veterinarian in the Oklahoma Agricultural and Mechanical college, Stillwater, writes as follows: "We are getting along nicely here in Oklahoma this year and as the legislature was kind to us in the way of appropriations, we have sufficient funds to supply us with much needed buildings. There are a great many Kansas State Agricultural college alumni in this state, but I seldom see any of them. R. L. Graves, '12, is a county agent in the north-eastern part of the state. Dr. M. R. Fowler, '15, is conducting a successful veterinary practice at Claremore. Five alumni are on the faculty of the

agricultural college here and we get together quite often and swap news."

Mrs. Horace (Smith) Bixby, '08, of Burley, Ida., in a newsy letter received recently, tells of a number of Kansas State Agricultural college graduates who live near them. Elmer Bull, '08, and Mrs. Amy (Elder) Bull, '08, and two children live in Albion where Mr. Bull is at the head of the manual training department of the State Normal school. Birchard Snodgrass and Mrs. Gertrude (Conner) Snodgrass, '05, also live at Albion, where Mr. Snodgrass is secretary of the state normal. Professor and Mrs. Werner, recently of the college, are also in the Kansas colony at the Normal. Mrs. J. A. (Ridenour) Plowman, '96, and husband with their family of three sons and two daughters live at Hayburn. L. W. Anderson, '14, is principal of the school at Burley, and is popular with his patrons and pupils. Horace Bixby, '08, has recently severed his connection with the government service and has gone into business, engineering and contracting, for himself. His firm is known as the Burley Electric company.

SANITARY POULTRY YARD MUST HAVE DOUBLE RUNS

One Should Be Seeded to Oats in Spring, the Other to Some Sorghum in July

It is necessary to have double runs to keep the poultry yards sanitary, according to N. L. Harris, superintendent of the Kansas State Agricultural college poultry farm.

"One of the yards should be plowed in the early spring and seeded to oats," says Mr. Harris. "These oats will furnish good succulent pasture until the first of July. In this period the other lot should be plowed and kafir, cane, or Sudan grass sown thickly. This will furnish the necessary green pasture from the time the oats are ripe until fall, when the other lot may be replowed and sown to wheat to furnish winter and early spring pasture."

Some form of shade is quite necessary to the best growth and health of poultry, Mr. Harris believes. If trees are not available ornamental castor beans planted around the fences are fairly satisfactory. It is necessary to protect these from the birds until they are a foot or so high, after which they will rapidly grow out of reach of the poultry.

Sunflowers are not satisfactory for planting in the poultry lot as they will not furnish the proper amount of shade. The poultry are fond of sunflowers when the plants are young, and quickly devour them.

MEN OF PROMINENCE TO SPEAK BEFORE STOCKMEN

Fifth Annual Meeting at Agricultural College, June 1, Is Expected to Draw Large Attendance

Speakers of national reputation are on the program for the fifth annual cattlemen's meeting to be held at the Kansas State Agricultural college June 1, the preliminary announcement of which was made today. Hundreds of stockmen from all sections of the state are expected to attend.

P. W. Goebel, president of the Commercial National bank of Kansas City, Kan., and of the American Banking association, will speak on "Financing the Cattle Industry." T. H. Ingwersen of Chicago, for 28 years a cattle buyer on the Chicago market, will discuss "The Cattle Buyer's Viewpoint."

The results of experimental work conducted at Manhattan will be given. Six lots of cattle are being fed with a view to determining the comparative value of the influence of different methods of curing alfalfa in fattening cattle. A comparison is also being made between alfalfa hay and sweet clover for fattening purposes, and of the value of corn and barley.

The visitors will be taken on an auto trip to the agronomy farm where the field experiments will be explained. An opportunity will be given to inspect the dairy herd and other college stock.

TO MAKE FARMING PAY

CITY MAN SHOULD KNOW PARTICULAR BRAND OF PRODUCTS

Judicious Advertising Is Effective Method of Getting Results—Use Printed Stationery and Give Farm Attractive Name

Mr. Farmer, make the city man demand your particular brand of products. One of the best ways of doing this is to advertise judiciously, in the opinion of H. W. Davis, associate professor of English in the Kansas State Agricultural college.

"The first steps a farmer should take in advertising are to standardize the products and name the farm," said Professor Davis. "A short, attractive name suggestive of the location of the farm or representing the products raised, is quickly and easily remembered by the consumer."

"Fresh peas, string beans, potatoes, butter, eggs, and all other produce should be standardized, and put up in cartons for market. These cartons should have the farm name and location of the farm printed on them. If the consumer is pleased with the goods he will know where to get them again. Without some mark of identification on his products the farmer cannot create a steady demand for his goods."

PRINTED STATIONERY IS EFFECTIVE

Printed stationery, with the farm name at the head, is a great aid in advertising, believes Professor Davis. The consumer receiving such stationery gets the impression that the farm is a big, reliable business concern. He is anxious to patronize an enterprising farmer.

Bulletin boards can be made use of in advertising products if the farm is on a well traveled road. Passers-by will stop to get fresh country milk and eggs. Attractive bulletin boards, and listing products for sale, together with the prices, will build up an automobile trade for the farmer. This saves him the expense of hauling his goods to the market.

GOOD ADVERTISING PRACTICES

If the farmer is near a market of considerable size, he may establish a delivery route in the city. Advertising by sales letters is especially effective since the farmer can reach the moneyed class of people in this way. A desirable mailing list can be obtained by getting a list of the heaviest tax payers from the city clerk.

"The big thing in advertising farm products," said Professor Davis, "is to get a mark of distinction on the goods sold. This will let the consumer know where the products come from and where he can get them again."

ROADSIDE TREE PLANTING SHOULD BE ENCOURAGED

Only Hardy Species Are Desirable, Says C. A. Scott, State Forester—Set Out Now

Roadside tree planting in Kansas should receive more attention, in the opinion of C. A. Scott, state forester. A well kept row of trees adds much to the general appearance of the adjacent farm property.

Only the very hardy, drouth-resistant and wind-firm species should be used, pointed out Professor Scott. For best effect the trees should be of the same species and as nearly uniform in size and shape as possible. They should be spaced not closer than 40 feet apart, and should be in rows, following the boundary fence. Uniform spacing and alignment add greatly to appearance. This distance provides ample room for full development of the trees without crowding or interfering one with the other.

Trees set at least 40 feet apart do not seriously interfere with growing crops. Closely spaced trees along a roadside are objectionable for the reason that they exclude a view of the farm from the road, and also interfere with growing crops up to the fence line. When a windbreak is desired these points must be sacrificed, and several rows of trees should be planted

as closely as the conditions will permit.

In planting trees, the holes should be dug fully twice as wide and twice as deep as the roots require in their natural position. By this method the soil is thoroughly worked over and pulverized, and is capable of absorbing and retaining a greater amount of moisture than would otherwise be possible. Loosening and aerating the soil liberates the plant food and induces a vigorous growth.

The tree should be set in place at the same depth that it grew in the nursery, and the roots should be spread naturally, covered with three or four inches of soil, and tramped firmly. The object of firming the soil is to bring the roots and soil in close contact. After this the hole should be filled and firmed within a few inches of the level of the surrounding ground. The surface should be left in a loose condition for a mulch.

WHEN DOCKING LAMBS TIE THEIR FOUR FEET TOGETHER

Two Methods Are Used—Burning with Iron Is Preferred

When docking lambs the four feet of the animal should be held together tightly against the body of the operator, points out A. M. Paterson, instructor in animal husbandry in the Kansas State Agricultural college.

There are two methods of docking. One is by cutting off with a sharp knife and the other is by burning with a docking iron. The latter is preferred, especially if the lamb has a large tail. The hot iron sears over the wound and prevents bleeding. If the lambs are old it is well to tie a string around the stump to prevent bleeding.

MISS LOTTIE MILAM IS NEW LEADER IN STATE CLUB WORK

She Will Give Attention to Sewing, Canning, and Bread Making

Miss Lottie Milam, a teacher of domestic science in Portland, Ore., has been appointed by the board of administration as assistant state leader in boys' and girls' club work. She will give special attention to the girls' clubs in sewing, canning, and bread making.

Miss Milam was reared on a farm in Missouri, and is a graduate in home economics from the Oregon Agricultural college. She has had wide experience in teaching in the rural schools of Missouri and in high school work in Oregon. For the last two years she has been teacher of domestic science in the Polytechnic school for girls in Portland.

W. K. CHARLES TAKES FIRST PLACE IN COLLEGIAN CONTEST

Sixteen Persons Participate in First Competition of Kind

W. K. Charles of Republic, junior in industrial journalism, won first place in the contest conducted in the winter term at the Kansas State Agricultural college by the Kansas State Collegian, the student paper. Of the copy submitted by Mr. Charles, 338 column inches were printed.

Second place was won by B. Q. Shields of Lost Springs, junior in journalism, and third place by Miss Dorothy Smith of Council Grove, special in journalism.

The students in the honorable mention list are Stewart Spencer of Neodesha, Miss Elizabeth Wadley of Kansas City, Kan., Miss Lillie Lehman of Junction City, C. W. Hestwood of Wichita, and Miss Zenith Mullen of Labette. Sixteen students participated in the contest.

The acreage of Bermuda onions in the big Texas district is 20 per cent greater than that last year, while the crop shows a 10 per cent better condition.

Corn meal 25 per cent with wheat 75 per cent will make satisfactory "light" bread, according to methods worked out by the United States department of agriculture.

DOT STATE WITH SILOS

FACILITIES FOR PRESERVING PRODUCTS OF FARM ARE NEEDED

Farmers Who Have Plenty of Silage Are Men Who Are Making Money—Silo Will Pay for Itself in One Season

Build silos!

Economy demands that all crops that can be turned into high priced meat or milk be taken care of this year. Indications point to high priced feeds.

"Every silo filled last fall in Kansas paid for itself in one season, and the chances are that similar results will be obtained by those who build silos this year," said A. S. Neale, specialist in dairying, division of extension, Kansas State Agricultural college.

"The wide-awake farmer is planning right now for next winter's feeding and these plans should include silage. Indications are that more silos will be built the coming summer than in any previous year. Silo manufacturers are already receiving heavy orders. The farmer who intends to buy should order at once, while he who would build should be planning for labor or materials."

NO FEE CHARGED FOR PLANS

The extension division of the Kansas State Agricultural college, Manhattan, gives special attention to making plans for silos to meet all conditions found on Kansas farms. This service is free to farmers of the state.

The farmers who had plenty of silage are the fellows who have made big profits in feeding live stock recently. John Cottrell, a Marshall county farmer, fed 1,200 tons of silage which he grew on 120 acres of ground. By careful calculations he estimates that this silage saved him more than \$10,000 worth of hay and grain. It cost him \$900 to put this crop in his concrete silos, thus leaving him more than \$9,000 net for the 120 acres of corn standing in the field unhusked, or more than \$75 an acre. Mr. Cottrell is planning to build two more concrete silos this summer with a capacity of 300 tons each. Three years' experience has taught him that he can make more from his corn crop through the silo than in any other way.

DRY ROUGHAGE IS NEEDED

"In addition to building a silo, an effort should be made to secure some good dry roughage to go along with the silage," said Mr. Neale. "Those who have alfalfa or clover need look no further than taking good care of these crops at the proper time. Those who do not have these should make an effort to get some other leguminous forage."

"One of the best hay crops for the dairymen is a combination of oats and field peas. The season is so far advanced now, however, that this crop must be sown at once, if at all. A little later cowpeas may be sown for hay. With a combination of good silage and leguminous hay the dairyman has at hand a ration which, with a small amount of grain will produce milk in the most economical manner."

"It is important that every man get busy on this proposition at once and not only take advantage of the exceptionally high price for dairy products but realize that by producing a good supply of these food essentials he will be helping the country in what may be the greatest crisis of its history."

ENGINEERING AND MILLING INDUSTRY STUDENTS ON TRIP

Visit Kansas City Industrial Plants and Attend Alumni Banquet

Thirty seniors in the departments of electrical and mechanical engineering, and milling industry, accompanied by instructors, spent Thursday, Friday, and Saturday in Kansas City, visiting some of the leading industrial plants.

The Witte Engine works provided lunch for the entire party on Thursday, having made a special request that the schedule be arranged so that the students might be the guests of the company at lunch time. Thursday evening the seniors attended the Kansas State Agricultural college alumni banquet at the Coates house. They returned home Saturday evening.

USE BOYS AND GIRLS

ARMY OF CHILDREN CAN ASSIST IN SOLVING FOOD PROBLEM

They Can Grow Produce for Immediate Use and Can Surplus for Future Consumption—Agricultural Colleges as Important Agencies

Let the army of children between the ages of 10 and 18 years grow garden produce for immediate use, and can the surplus for future consumption and much will be done toward solving the food problem in this country. Under proper direction additional foodstuffs valued at more than \$400,000 could be produced, according to Edward C. Johnson, dean of the division of extension, Kansas State Agricultural college.

"Ordinarily children have nothing special to do," said Dean Johnson. "Even on the farm there are many of them whose efforts, if well directed, could be made more effective and worth while from an economic standpoint, and all this without the so-called 'child labor' where children are employed in heavy work from early morning until late at night.

"These children can be of great use in the farm home, on the farm, in the village home, and in the village garden. If only a portion of this army were put to work producing table products the results would be astonishing."

GLENWOOD CLUB AS EXAMPLE

In the Glenwood community in Leavenworth county, a typical farm community, pointed out Dean Johnson, there is a canning club which has as one of its principal objects the growing of the garden produce and the canning of the surplus for home use during the winter months. This club consists of 30 mother-daughter teams. During the season of 1916 the club grew in the garden and canned more than eleven thousand quarts of garden and orchard products in addition to the products used on the table during the summer gardening season. This was at the rate of 366½ quarts for each team.

If only one-half of the 10,755,790 rural families in the United States—families living in incorporated towns of less than 2,500 and in the open country at the time of the 1910 census—did as well they would produce and put up for winter use 1,971,561,500 quarts, which if valued at 15 cents per quart—a low estimate—would be worth \$295,714,225. This would supply one-half of the rural families in the United States with one quart of food products per day for every day in the year, and thus would release an equally large quantity of other products more easily transportable, for use in the army or the laboring families in the city.

If one-fourth of 9,499,765 urban families—families living in cities of more than 2,500 population, census of 1910—did equally well by gardening in back yards and on vacant lots, another 872,560,916 quarts of products, valued at \$130,894,137, would be produced. Combining the products of the rural and city population the food produced would be valued at \$426,608,362.

NEED GROUPS WITH LEADERS

"A beginning towards the mobilization of this potential army of workers has already been made in the gardening and canning clubs throughout the country conducted by the extension services of the various agricultural colleges and through the school systems. This army needs to be adequately organized into club groups with leaders for every club.

"Every club of six or more boys and girls should have some older person to direct its activities. This leader may be a mother, a father, a school teacher, or any public spirited citizen. The boys and girls themselves organize by electing officers and selecting the type of work which they wish to follow. They then get in touch with the agricultural college which sends the necessary instructions.

"That the children are glad to do this work has been demonstrated al-

ready in the history of the clubs. No member of last season's corn clubs, pig clubs, poultry or sorghum clubs in Kansas made as high profits as did the members of the garden clubs of the state. A little fourteen-year-old girl made a net profit of \$20 from one square rod of garden. Add to this normal interest the stimulus of a patriotic interest and the army will be far more effective than it is in a normal year."

OUTLINE OF GENERAL PLAN

After the most feasible plans for increased production and conservation of resources have been decided upon by the leaders in agriculture throughout the country, the agencies largely responsible for making them effective will be the agricultural colleges and the United States department of agriculture through their extension organizations and the state boards of agriculture, according to Dean Johnson.

The agencies through which these will work will be as follows: First, a group of agricultural specialists in agriculture and home economics connected with every agricultural college and working in coöperation with the United States department of agriculture.

Second, county agents working in connection with well organized farm associations known as farm bureaus of agricultural clubs.

Third, a well organized administrative force handling the extension machinery.

Fourth, farmers' organizations, including farm bureaus, farmers' institutes, boys' and girls' clubs, granges, farmers' unions, and similar organizations, and the rural church and the rural school.

Fifth, the agricultural and general press.

MEET TO DISCUSS PROGRAM

The institutes, farm bureaus, granges, farmers' unions, and other organizations named should be invited by the agricultural colleges, the United States department of agriculture and by governors' proclamation in many cases, to meet on a certain day or days to discuss the program and adopt for the local community such parts of it as are likely to give best results locally. Every member of such organizations should be urged through their executive committees to devote his efforts to putting into effect at least some part of this program on his farm, and it should be impressed upon him that this is first of all a patriotic duty, and second that it will also result in economic gain inasmuch as the world's food supply is short.

The representatives of the agricultural colleges and the United States department of agriculture, such as county agents and specialists, as well as the representative of the state boards of agriculture necessarily will serve as the directing and informational agencies. Constantly at work with individual farmers and groups of farmers in organized public meetings, they will teach the purpose of the program—its necessity as well as its possibilities—so that everyone will have the incentive to exercise himself to the utmost in behalf of increased production.

NECESSITY FOR COÖPERATION

The necessity for close coöperation between the state boards of agriculture and the extension service of the various institutions is clear, pointed out Dean Johnson. The type of coöperation will depend entirely upon the types of organization in the several states. Each state must make its own plans in that respect.

The agricultural press will be one of the most useful agencies in this work. The program for the state having been decided upon the press in and out of season can emphasize and reemphasize what the program is and urge its application on every farm and in every home where such application is possible. The agricultural specialists of the college will furnish the necessary informational material to the press.

The weekly and the daily press in the same way by emphasizing the program for the state and using its col-

umns freely for giving information in regard to that program, can stimulate production and conservation of what is produced to a remarkable extent.

The press can be extremely helpful, also, by announcing and urging attendance at all public meetings scheduled for consideration of this program. After public opinion has been shaped and when it demands the most efficient production and conservation of what is produced, the average family, from a sense not only of profit but of duty and of patriotism, will respond to it.

MORE FOOD IS NEEDED

(Concluded from Page One)

"Kansas has increased its beef animals 33 per cent within three years. We cannot support more beef animals without raising more feed. We can easily support many more beef animals if more feed is produced.

EAT ROOSTERS AND FEED HENS

"If poultry raisers would eat their roosters and feed their hens properly they could easily double the number of eatable eggs this present year. The price of eggs is higher this year than last because of the increased price of feed.

"Because of the high cost of seed potatoes, a one-third less acreage in potatoes is the present prospect for Kansas this year. There are plenty of seed potatoes in the country. The only way to get this seed and arrange for an immediate planting is to provide some means whereby farmers may be advanced the money to secure the seed. Immediate action on this point is absolutely necessary if the potato product of the country is to be up to standard.

MORE BACK-YARD GARDENS NEEDED

"If we send no men to the front we would still have a labor shortage. We must call on the children and even upon the men and women in our cities to work back-yard gardens. We are not worried with the problem of feeding the farmer, but we need to worry over the problem of feeding our cities. Thousands of acres of vacant city lots can be utilized and thousands of hours of idle time may be thus profitably employed. The people in cities must learn to can fruits and vegetables, and have their vegetable supplies in the cellars the same as do the people in the country.

"We can produce enough food products if we can arrange the machinery for proper distribution. I believe we can have a proper distribution and control of our food output only under the supervision of a federal advisory committee, and probably under the immediate direction of our army. We are organized for production. We must organize at once for distribution and marketing."

FEET OF SHEEP SHOULD BE GIVEN ATTENTION EACH YEAR

They May Be Trimmed at Shearing Time, Says Specialist

The feet of sheep should be trimmed at least once a year and as much oftener as necessary, asserts A. M. Paterson, instructor in animal husbandry in the Kansas State Agricultural college.

"The hoof grows rapidly and if the sheep are not traveling over rough ground the feet will grow faster than they wear," said Mr. Paterson. "The trimming may be done at shearing time, and should be done from the under side with the use of a hoof knife or a sharp pocket knife."

GREEK GIRL IS STUDENT IN AGRICULTURAL COLLEGE

Is One of Six Young Women to Be Sent to United States

Miss Emilie Peristiane, a Greek girl, has enrolled in the Kansas State Agricultural college for the spring term. Miss Peristiane is one of six girls sent to the United States by Queen Sophie of Greece to prepare themselves to teach in a school of housekeeping which is being established in Athens.

Miss Peristiane has formerly taken work in household economics at Simmons college, Boston. She will spend most of the spring term in Manhattan and on her return will visit several other institutions.

BIG MEETING AT HAYS

FOURTH ANNUAL ROUND-UP INTERESTS HUNDREDS OF STOCKMEN

Experiments Prove that Cost of Wintering Cattle May Be Reduced by Feeding Products of Little or No Commercial Value

That much produce of little or no commercial value can be utilized in feeding cattle in western Kansas, was an important point brought out at the fourth annual round-up at the Fort Hays Branch Experiment station, April 5.

Cows in experimental lots consumed an average of nine pounds of wheat straw, which is nominally a waste product in the Kansas wheat belt, and is frequently burned rather than saved for feed. Hay which is damaged to such an extent that it brings \$5 or \$6 a ton below market values for good hay, can be used to a large extent in winter feeding of breeding cattle.

That beef breeding cows can be wintered in western Kansas on feeds best adapted to soil and climatic conditions of that section, was pointed out. The experiments proved that the farmer is justified in feeding well the females which he expects to develop into breeding cows. It was shown that where fed well the cows attain greater size, are more rugged, and are better mothers.

BEEF FEMALES IN DEMAND

The demand for beef breeding females was never so great in Kansas as today, pointed out W. A. Cochel, professor of animal husbandry in the agricultural college, who explained the experiments. This indicates, he believes, that the Kansas cattlemen are about to become more extensive breeders of cattle rather than feeders of steers shipped in from the south.

The meeting was well attended by stockmen from all sections of the western portion of the state. As many as 175 automobiles were counted at one time, and it is estimated that at least 200 machines were used in conveying the cattlemen to the meeting. Between 1,000 and 1,500 persons were present.

Dr. W. M. Jardine, dean of the division of agriculture, presided at the meeting. Charles R. Weeks, superintendent of the branch station, explained the work of the station and its purposes. C. G. Cochran, banker of Hays, spoke on "Purebred Live Stock of Western Kansas." He has handled live stock under all conditions. He expressed the opinion that in the long run purebred cattle are the most profitable and that it pays to feed well. W. R. Stubbs, former governor of Kansas, spoke on "The Cattle Outlook." L. E. Call, professor of agronomy, discussed "Feed Production."

AN EXPERIMENT WITH HEIFERS

In one experiment 80 heifers were divided into two groups. This experiment started in December, 1915. Half of the cattle were fed in the winters of 1915 and 1916, 4½ pounds of corn cob meal and one pound of linseed meal daily with alfalfa hay, silage, and straw. The second group was given no grain but the cattle were handled the same otherwise.

Each group was subdivided in the spring. Twenty head were taken out of each lot and placed in pastures by themselves. They were bred as yearlings. The other lots were grazed on similar pastures but not bred. The cattle were reassembled December 2, 1916, in the same manner as in the previous winter.

Lot 1 was fed three pounds of corn and one pound of cottonseed cake, with alfalfa hay, silage, and straw. The second lot was wintered without grain.

The bred heifers are 35 pounds heavier than those that were not bred. Those that have been well fed in the winter seasons weigh on the average 980 pounds, while those without grain average but 818 pounds.

Calves are now arriving in each lot. Those that were well fed are producing stronger and more vigorous calves, and have given less trouble at the time

of calving. They have cost \$15 more per head to grow and handle than have the cattle in Lot 2. The general estimate of those present was that the cattle in Lot 1 are now worth \$25 a head more than those not given the extra feed. This indicates that it pays in dollars and cents to feed breeding heifers well. This experiment will be continued until all heifers are mature, at which time final conclusions will be made.

FEEDS FOR COWS COMPARED

Five lots of three-year-old breeding cows—20 to a lot—were used in another experiment. The object was to compare the value of feeding various combinations of alfalfa hay, sorghum hay, cottonseed cake, and silage. Lot number 1 was fed sorghum hay and 2 pounds of cottonseed cake; number 2, sorghum hay, one pound of cottonseed cake, and sorghum silage; number 3, alfalfa hay and sorghum silage; number 4, alfalfa hay and corn silage; number 5, alfalfa hay and sorghum silage.

The most satisfactory gains were made in lots 2 and 4. Lot 4 was the most economical of the five lots.

The results showed that where only sorghum hay is available 2 pounds of cottonseed cake or 10.9 pounds of alfalfa hay will furnish sufficient protein for the proper development of the dry cow.

It was shown that sorghum silage is not quite so efficient as corn silage when fed with alfalfa hay. It was found that 11 pounds of alfalfa, 15 pounds of silage, and nine pounds of straw was the most efficient ration for winter feeding dry cows.

RANGE BULLS HEAVY EATERS

The third test was between cows that dropped calves in the fall and nursed them in the winter as compared with dry cows expected to calve in the spring. It cost \$7 more to winter a cow with calf at side than a dry cow on the same kind of feeds. Even then the dry cows made more rapid gains live weight.

Range bulls, averaging 1,500 pounds, consumed an average of 15 pounds of alfalfa, 22 pounds of silage, 4½ pounds of straw, 6½ pounds of sorghum hay, and 1.6 pounds of cottonseed cake per head daily and gained an average of 1.68 pounds per head per day. It was shown that it cost twice as much to winter a bull as a cow.

FARMER'S HEADACHES ARE DUE TO EYE DIFFICULTIES

Day of Plowing or Riding in the Wind is as Tiring as Same Time Spent in Study, Says Physician

Many farmers wonder why their heads ache after a long day in the field. They blame the rich food they eat, but nine times out of 10 their eyes are causing the trouble, in the opinion of Dr. C. M. Siever, physician in the Kansas State Agricultural college.

"The farmer thinks because he does not read a great deal that his eyes should not bother him, but a day of plowing or riding in the wind is as tiring to the eyes as a day of study," said Doctor Siever. "If all counties required a periodical medical examination of school children, complaints of the young farmer would be found and adjusted. The farmer would then know the ailments of his children and incidentally find things out for himself.

"A county health officer, working full time, should be employed in every county in Kansas. He should test the eyes, ears, and noses of the children and make all other necessary examinations. The schoolhouse should be the community center.

"The health officer should keep careful watch on all epidemics that break out in the county. The employment of this officer would be a great economic saving to the county. One case of typhoid fever caught in time will save 10 other cases.

"As soon as this system is used by all counties the farmer will know his ailments, and, knowing how to treat them, he will be a healthier, happier man."

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TO USE ALL RESOURCES

COUNCIL OF DEFENSE PLANS KANSAS SERVICE IN WAR

Body Named by Governor Opens Campaign for Greater Production and Conservation—To Take Census of Materials and Needs of Counties

Every resource of Kansas will be utilized for the winning of the war, according to plans made yesterday by the state council of defense appointed by Governor Arthur Capper. An emergency committee is meeting today to make a census of the resources and needs of every county, especially with reference to food, seed, and labor. The committee comprises Governor Capper, Dr. Henry Jackson Waters, president of the Kansas State Agricultural college; W. R. Stubbs, former governor; Dr. W. A. Lewis, president of the Fort Hays Kansas Normal school; and Henry Lassen of Wichita.

The council was organized by the election of Doctor Waters as permanent president; J. C. Mohler, state secretary of agriculture, as secretary; and Walter L. Payne, state treasurer, as treasurer. Vice-presidents were named by Doctor Waters from the eight congressional districts as follows: Mrs. Cora Wellhouse Bullard, Tonganoxie; Charles F. Scott, Iola; E. B. Lanyon, Pittsburg; William Allen White, Emporia; M. McAuliffe, Salina; Dr. W. A. Lewis, Hays; Emerson Carey, Hutchinson; Henry Lassen, Wichita.

CAPPER POINTS OUT PROBLEMS

In opening the conference Governor Capper pointed out the problems confronting the state in the present emergency, emphasizing the supplying of seed, furnishing of ready funds for seed equipment, increasing the supply of farm labor, organizing boys' and girls' clubs, increasing the amount of live stock, discouraging speculation in food stuffs, plans for efficient and economic distribution, household economies, the encouragement of enlistment, and home guards for property.

We must stop feeding gophers and prairie dogs and feed our allies instead, urged President Waters, who pointed out that the food reserve of the world had never been lower than at the present time. He urged that every effort be made to destroy insect and animal pests and to improve agricultural conditions for the coming season in every respect. He advocated that every high school plan to test seed for the farmers in its territory.

The college was represented also by W. M. Jardine, dean of agriculture, and Edward C. Johnson, dean of extension.

COUNCIL ADOPTS RESOLUTIONS

These resolutions were adopted by the council of defense:

Resolved, By the Kansas state council of defense that the Kansas Wholesale Grocers' association, and Kansas Retailers' association, and the Kansas State Millers' association, and all kindred organizations are urged to influence their customers to limit their purchases of all staple food products to not over thirty days' supply for each purchaser. Also to make it plain to everyone that while the food supply of the staple items is short, the situation is irritated and the values enhanced by speculative purchases, for needs in many instances beyond the coming crop. Moreover, purchasers should be reminded of the fact that hysterical buying beyond current needs simply increases the price of said goods.

The Kansas state council of defense believes that speculative future buying throughout the country has done much to shorten the available supply of staple foods and advance their prices. It is a patriotic duty to not increase the seriousness of the situation

but rather to lessen it by conservative buying only. Advancing prices will not do it. If an appeal to a state and national duty will not bring desired results, then limit the purchases.

GREATER ECONOMY IS URGED

Resolved, That we urge greater economy of expenditure in the household, in the purchase and use of food, clothing and household goods in general.

Resolved, That it is the sense of this state council of defense that the practice of margin buying is one of the greatest contributory causes of the high prices, and we recommend to the congress of the United States that option buying and selling be prohibited by action of congress.

Inasmuch as at least twice the usual acreage is being put into gardens this year and there may be a surplus of garden stuffs in many towns as well as in the country, it is the sense of the council that every family be urged to conserve all surplus by canning, especially surplus of the standard crops, beets, beans, corn, and tomatoes.

It is the sense of this council also that every municipality be urged to employ one of its teachers throughout the summer months to supervise the gardening work and the utilization of the surplus, and that coöperative canning clubs and community canning plants be encouraged and established under competent supervision to can and conserve surplus garden products, both from country and from town.

It is the sense of this council that the boys and girls of every community are eminently capable and willing to carry this work through to a successful issue.

THINK TWICE BEFORE YOU ABANDON WHEAT FIELDS

Even When Badly Infested with Hessian Fly, They May Be Harvested at Profit

That it is well to think twice before abandoning fields of wheat infested by Hessian flies, is the advice of T. H. Parks, specialist in entomology, division of extension, Kansas State Agricultural college.

"Adult flies began emerging from flaxseeds in early sown and volunteer wheat in the second week of April and are now depositing eggs on wheat regardless of when and where it was sown," said Mr. Parks. "This will cause some injury to fields of wheat not now infested. The 1917 crop will bring a high price on the market, and after the spring brood of Hessian flies is 'fed' even the worst infested fields may be harvested at a profit.

"The complete failure of the wheat crop due to drouth in some counties where the Hessian fly was present last year, should put a check to the devastation by this insect in those sections for several years to come."

Crop rotation has done much to solve the problem of the Hessian fly, in parts of Dickinson and Saline counties, reports Mr. Parks, who has investigated conditions in those counties. The best looking wheat is that which was planted in corn ground after the corn was removed for silage. But few Hessian fly flaxseeds are to be found in this wheat.

Twenty per cent of the tillers of hard wheat sown in September on ground seeded to wheat in 1916 were found to be infested. Wheat sown in September on corn ground averaged 8 per cent infested and that sown after October 1, less than 2 per cent. Soft varieties suffered less from fly, but more from winter killing than the hard varieties on many farms of this section of the state.

Sweet clover is being used extensively for pasture in North Dakota, where its carrying capacity has been found greater than that of any other pasture.

CORN AND KAFIR NOW

AGRONOMIST URGES PLANTING OF STANDARD, RELIABLE CROPS

Use Ground Where Wheat Has Been Killed by Drouth or Cold—Leave Production of Specialized Crops to Experienced Growers

Planting of spring crops in fields where wheat has been destroyed by dry weather or winterkilling is urged by L. E. Call, professor of agronomy in the Kansas State Agricultural college.

"It is too late and the ground is too dry to sow small grains like barley, oats, and spring wheat," said Professor Call. "This ground should, therefore, be planted to an intertilled spring crop like corn or kafir or some other kind of sorghum.

"This is not the time to experiment with new kinds of crops. Grain of all kinds will be too high in price and too urgently needed to attempt anything new. Such crops as beans, cowpeas, and soybeans should not be grown on a large scale by inexperienced growers. The production of these crops should be left to those who have grown them and who are familiar with their culture. It is the safest plan to grow crops like corn and kafir which are reasonably reliable and the culture of which is familiar to all."

SORGHUMS ARE SUREST CROPS

Kafir and the other sorghums are the surest crops to grow in the wheat belt of Kansas, believes Professor Call. A large acreage of these crops should be planted. In the eastern part of the wheat belt varieties of kafir like the blackhulled and the pink should be planted. In the western part such varieties as dwarf blackhulled kafir, dwarf milo and feterita are the most dependable kinds of grain sorghums to grow.

Large growing and late maturing varieties of kafir and other sorghums mature so late in the season and leave the ground so dry and depleted in available plant food that wheat does not make so good a growth as when preceded by corn or a dwarf early maturing variety of sorghum.

Kafir ground should be held for corn the next season, when possible. If the kafir ground is fall listed, the freezing and thawing of winter will improve the tilth of the soil and the lister furrows will hold snow and the ground will be in ideal condition for corn the next season.

USE LOCALLY GROWN SEED

Corn or an early maturing variety of grain sorghum like dwarf kafir, feterita, or milo, is better than kafir to plant on ground that is to be sown to wheat in the fall. Locally grown, thoroughly acclimated seed corn should be planted. There is sufficient locally grown corn in every section of central and western Kansas to plant the crop. This seed should be located, tested for germination, and planted when known to be of strong vitality. Corn brought in from a distance will usually not produce a good crop the first season.

Corn and kafir planted in every other row is more drouth resistant and leaves the ground in better condition for wheat than corn or kafir planted in the usual manner. When these crops are planted in this manner the rows are spaced seven instead of three and a half feet apart. A blank lister row is alternated with a planted one which spaces the rows twice the usual width. This method of planting has been practiced in several places in western Kansas and in a limited way in other parts of the state.

WIDE SPACED CORN YIELDS WELL

The yields for wide spaced corn have been higher than those for corn planted in the regular rows, except in

wet seasons. The kafir yields are usually lower but the ground is left in much better condition for wheat than when the crop is planted in the usual manner.

Seed is saved by wide spacing as only half the usual amount is planted. The weeds most difficult to control are those which come up in the row. Since only half the row space is planted, this trouble is greatly reduced. The two row cultivator can be used with ease even though the distance between rows is irregular.

INSURANCE IN DRY YEARS

After the crop becomes too high to cultivate by straddling the rows, large implements drawn by two horses can be used in cultivating the crop. It is a more certain method of producing corn and should be practiced on a portion of the corn area in western Kansas as a means of insurance in dry years.

Use of this method leaves the ground in excellent condition for seeding winter wheat. Wheat can often be grown on wide spaced corn ground more satisfactorily than on summer fallow. The wheat does not make the excess growth of straw characteristic of wheat on summer fallow, while the stalks if left on the ground hold the snow during the winter and aid in preventing soil blowing. To obtain any benefit from wide spaced corn and kafir, it is necessary to prevent the growth of weeds in the space between the rows. Nothing is gained if weeds are allowed to rob the crops of moisture.

DON'T PLANT EXCESSIVE ACREAGE

Every acre that can be properly handled with the labor and equipment on the farm should be planted to spring crops, yet no greater acreage than this should be planted, in the opinion of Professor Call. Any land that cannot be planted in season and properly cultivated after it is planted should be held in reserve for wheat next fall. Such land should be plowed, listed, or disked just as early in the summer as possible and worked so that weeds will be killed. If the plowing can be done by June or early July such ground should be in ideal condition for wheat in the fall.

If the spring is wet, such ground should be disked in May to prevent too rank a weed growth before plowing.

STUDENT IN JOURNALISM TO ASSOCIATED PRESS

Ralph H. Heppe Lands Responsible Position in Kansas City—A. W. Boyer to Mercury

Ralph H. Heppe, senior in industrial journalism in the agricultural college and city editor of the Manhattan Daily Mercury, left today for Kansas City where he will become relief editor for the Associated Press. Arthur W. Boyer, junior in industrial journalism, has resigned as editor of the Kansas State Collegian, student paper, to become city editor of the Mercury.

Mr. Heppe has been connected with the Mercury since April, 1915, when he was employed as reporter. The following October he was promoted to the city editor's desk. He has been prominent in industrial journalism and college activities. Mr. Boyer is not only a good student, but finds time to engage in college competitive events. He has been successful in oratory and debate.

Let us get more county agents in Kansas and Missouri and all through the southwest. It is worth while. The farmers need someone to help them get together just like the business men in the cities who are held together through the paid secretaries of their associations. —Farmer and Stockman.

FARM ON SOUND BASIS

NO ROOM FOR GUESS WORK BY UN-BUSINESSLIKE MEN

Successful Farming Now Depends Largely on Whether Operator Is Judicious Manager, Believes Specialist in Agricultural Economics

Farmers should apply business principles to farming, according to Theodore Macklin, in charge of agricultural economics in the Kansas Agricultural Experiment station.

"The farmer of today lives on the profit which he can make, more than he does on the few things which he produces and consumes without first selling," said Mr. Macklin. "His ideal is profit above everything else.

"Many complex forces affect the size of the farmer's profits. Market conditions and prices and the farmer's individual cost of production should be given consideration. The farmer's profit consists of the difference which may exist between the market price when he sells his products and his individual cost of producing those products.

MARGIN OF PROFIT SMALLER

"In the past this difference between the selling price and the supposed cost of production has been wide enough so that practically any farmer, regardless of his training, experience, and skill, could make a living. The margin of profit has been growing smaller each year.

"When profits were relatively easily secured in generous amounts, the farmer could guess as to which lines of production were worth while, but now that margins have become so small, some way of keeping an account of his business is absolutely necessary if he would be certain of making the profit which he desires.

"The forces which affect the farmer's business are more complex than in any other line of work. These forces are of two kind—those which he can control to his interest if he makes the attempt, and those over which he has no control.

CONTROL COST OF PRODUCTION

"For the most part a farmer cannot control prices but he can control their cost of production within reasonable limitations. In order to control his cost of production, he needs to have information which can only be secured by keeping definite account of the labor and investments and other costs of producing his main line products.

"Knowing the amount of these costs, he can then compare them with the ruling prices of the market and see what his chances are with respect to making a profit. If he is not making a profit, his question is, 'Can a profit be made in this particular type of farming and, if not, what sort of farming will make profits?'

MUST BE BUSINESSLIKE

"The answer can be made only by the individual farmer who has had sufficient training to make him an independent and accurate thinker, capable of changing his enterprise from an unprofitable type to one that is profitable. To think clearly, he must have secured accurate information as to the different possibilities from which a choice can be made. This information varies according to every locality and its use and value depends upon the capability of the farmer himself.

"Successful farming from now on depends, therefore, upon whether the farmer makes himself a good business farmer and upon the extent to which he follows business methods in the direction and management of his complex enterprises."

THE KANSAS INDUSTRIALIST

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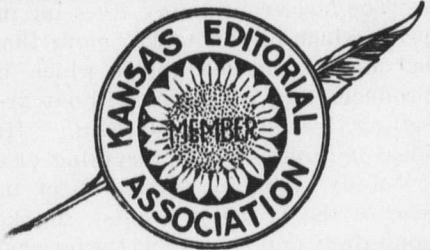
H. J. WATERS, PRESIDENT Editor-in-Chief
N. A. CRAWFORD Managing Editor
J. D. WATERS Local Editor
ADA RICE, '95, M. S. '12 Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

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WEDNESDAY, APRIL 18, 1917

A WISE AND TIMELY ACT

Governor Capper acted wisely when he appointed a state council of defense, and placed on it men representing the wide variety of industries carried on in Kansas. Governor Capper is a newspaper man and realizes the value of timeliness in every relation of life. He appreciated the fact that the next 60 days would in large measure determine the crop of Kansas for the season of 1917, and Kansas crops are the biggest contribution which the state can make to the winning of the war.

Consequently, while numerous other states were hesitating Governor Capper named his commission, made it representative, and started it to work.

The Kansas council of defense can do much toward the success of the United States in the present emergency. The war must in large part be won, so far as America is concerned, through the furnishing of food supplies. Kansas has the soil, the climate, and the population to produce a large surplus of foodstuffs. The rains of the last day or two, extending over a large part of the state, make the probability of a first-class yield of crops much greater. What is now needed is the coöperation of all the people of the state—farm owners, bankers, agricultural specialists, laborers, and everyone else—to bring Kansas crops to a maximum. The council of defense has laid definite, clear-cut plans to this end. The work which it inaugurates will count immeasurably in the state's contribution to the share of the United States in the war.

CHINESE ARE FARMERS

The Chinese are agriculturists, and the hoe is an emblem of honor. Farmers are held in highest esteem. In the social scale they are next to the scholar. Until recently the emperor and his nobles would always in the early spring offer sacrifices in the Temple of Agriculture. After these ceremonies the emperor, with hundreds of princes and nobles and musicians, would go to the field near the temple and pay honor to the tillers of the soil. The emperor dressed like a farmer, put his hand to the plow, and turned nine furrows across the field while the musicians chanted the praises of agriculture.—James T. Nichols in Wallace's Farmer.

THE ORIGINAL POTATO KING

John Pounds, an English cobbler, was the original potato king. He cobbled shoes for sailors in Portsmouth and was grieved by the sight of the ragged boys who ran about the quays. He set himself the task of rescuing them. A hot potato was a wonderful delicacy for the youngsters. So John Pounds set his bait. He offered hot potatoes to boys who would come to him and be taught to read and write. Often he was seen pursuing a boy

along the wharves holding out a potato like a farmer trying to catch a colt with a feeding of oats. Usually John Pounds and the hot potatoes won. He crowded his narrow workroom with his charges. When he died it was reported of him that he had raised 500 children to useful citizenship.—Denver Field and Farm.

RURAL OPPORTUNITIES

The drift of the country young men to the cities has come to a stop. We are hearing a good deal of the movement to the farms, for the living costs in the cities are impossible these days for all persons on ordinary incomes. There is a better appreciation of the opportunities of the country than there has ever been before. This means a brighter and better rural life in Kansas.

High prices will prevail for farm products from now on—there will never be a return to the low levels of the past. The prices of farm products in the future will be based on the cost of production, for the days of over production have passed. Higher labor incomes will be obtained by farmers in the coming years. Young men should stay with the farms if they expect to get the most from life.—Farmers Mail and Breeze.

UTILIZES SPARE TIME

I have observed that the farmer who makes the greatest mark or progress is invariably one who is perpetually on the lookout for little side lines that may reinforce his efforts at the more regular farm labors. That is, he seeks to make the slack period a busy and profitable one by constantly engaging his time and effort.

Last year, during one of the slack periods we put one of the teams and a man on a road job that was near our farm, and thus managed to add almost a hundred dollars to our profits for the year.

Then there are a lot of small side lines that may mean in the course of a year a great deal to the industrious farmer. Several years ago I added a small cobbling outfit to my supply of farm tools. It cost but a few dollars. Since that time I estimate that it has brought me a big profit after making liberal deductions for original cost and the time I have spent using it. This is due to the fact that I use it at times when it is impossible to do the more regular farm work—on rainy days and long winter evenings.

I have arranged the tools so that they are readily portable. Thus, I can spend an evening in the kitchen mending the family shoes, thereby saving money, and all the while enjoy myself as much as if I were sitting around doing nothing.—P. C. Grose in Farm and Fireside.

THE CHEMIST

Hitherto the world has looked upon the chemist as a mysterious being, who concealed himself and carried on his experiments in a secret laboratory. He was supposed to concern himself with trying to discover the elixir of life, a method of transmuting the baser metals into gold, or in making poisonous gases to be used in wartime. The war has brought the chemist to the front, and we now see that his efforts are utilitarian and necessary, and that he is making a very large figure in the activities of the world.

The chemists of Europe have taken up many substances that were supposed to be valueless, and converted them into wholesome and nourishing food for the people. They have taken up standard articles of food, and by processing them and commingling them they have increased the food supply, and in this way benefited their countrymen.

In this country our chemists and scientists have been busy for a long time discovering new processes of manipulating iron and steel. They have made it possible to pile up enormous fortunes by the advantage they provided, and which other nations did not possess.

Chemistry has been a great science time out of mind, but laymen knew but very little about it, because it was supposed to belong to the mysterious

upper ranges of thought and investigation. It challenges the best thought of the world at the present time, but it has been brought down to where its ends are practical and useful. What the chemists will do for the world in the near future not even the most daring will hazard a conjecture.—Memphis (Tenn.) News-Scimitar.

WRITERS LIVE LONG

Anyway, the people who write for a living have the latter spread out through a great number of years. They who take the pen do not as a rule perish short of ripe old age. The business of writing should be a "preferred risk" with the insurance companies.

March 1 was the eightieth birthday

A QUARTER CENTURY AGO

Items from The Industrialist of April 16, 1892

The cost of repairing damages from the hailstorm of April 3 will fall little short of \$400.

S. N. Chaffee, '91, was a visitor at the college on Thursday, having completed his winter's teaching.

The Ionians are waking the echoes with song, speech, and orchestra, preparatory to the exhibition next week.

Professor Popenoe's new horse makes it necessary for his buggy to have a new spindle, boxing, and fifth wheel.

State Fish Commissioner Mason of Eureka called at the college on Monday in company of the Rev. Mr. Drake.

An Appeal to the Farmer

President Woodrow Wilson

THE supreme need of our own nation and of the nations with which we are coöperating is an abundance of supplies, and especially of foodstuffs. The importance of an adequate food supply, especially for the present year, is superlative. Without abundant food, alike for the armies and the peoples now at war, the whole great enterprise upon which we have embarked will break down and fail. The world's food reserves are low. Not only during the present emergency but for some time after peace shall have come, both our own people and a large proportion of the people of Europe must rely upon the harvests in America. Upon the farmers of this country, therefore, in large measure, rests the fate of the war and the fate of the nations. May the nation not count upon them to omit no step that will increase the production of their land or that will bring about the most effectual coöperation in the sale and distribution of their products? The time is short. It is of the most imperative importance that everything possible be done and done immediately to make sure of large harvests. I call upon young men and old alike and upon the able-bodied boys of the land to accept and act upon this duty,—to turn in hosts to the farms and make certain that no pains and no labor is lacking in this great matter.

The government of the United States and the governments of the several states stand ready to coöperate. They will do everything possible to assist the farmers in securing an adequate supply of seed, an adequate force of laborers when they are most needed, at harvest time, and the means of expediting shipments of fertilizers and farm machinery, as well as of the crops themselves when harvested. The course of trade shall be as unhampered as it is possible to make it and there shall be no unwarranted manipulation of the nation's food supply by those who handle it on its way to the consumer. This is our opportunity to demonstrate the efficiency of a great democracy and we shall not fall short of it!

anniversary of William Dean Howells. He is "hale and hearty," as the New Englanders would put it. Still, Howells is not yet at the age reached by some of our other famous American men and women of letters. Bancroft lived to be 91, Whittier and Oliver Wendell Holmes were 85 at their death, and Mrs. Stowe also reached that age. Emerson died at 79, Longfellow at 75, and Lowell at 72.

The average writer is an individual who looks much at his inner self and much at the life about him. He quietly but constantly studies humanity—and is thus always in intimate touch with the people of the world. He is more prone than the average person to study also the people of the past—to speculate concerning those who are to come. Thus the writer lives in a wondrously enlarged sphere at all times—one as boundless of limits as creation itself.

It must contribute to the welfare of the physical man to thus expand the conscious mind; to send the thoughts hither and yon in quest of interests of humanity which may be as widely separated as the points of the compass. Exercise is an aid to the muscles, and develops all tissues. Elasticity of inner thinking—but always in harmony with clear-cut purpose—may not only be capable of broadening and deepening and strengthening the intellect, but also the body. Thus are the years of the student of humanity made longer through his work.—St. Joseph (Mo.) Gazette.

The new regents were well pleased with the condition of the college, expressing surprise at the growth already made.

The Western School Journal for April contains a biographical sketch of President Fairchild, illustrated by a large halftone portrait.

Not quite 400 students report for daily duties this term, more than the usual number having been tempted into the farm work this spring.

The horticultural department has made the Beloit Reform school a gift of 100 white ash trees, 25 Mariana plum trees, and from six to 25 plants of 24 varieties of ornamental shrubs and vines.

The Hon. John A. Anderson, ex-president of the college, will leave Cairo, Egypt, for home on April 17. He has for several months been suffering in a hospital, unable to make the journey home.

Mr. Biddle, president of the State Farmers' alliance, visited the college on Wednesday in the company of the Rev. Mr. Norton of Manhattan, and spent a few hours in looking over the various departments.

A division of the third-year class occupied the chapel rostrum yesterday afternoon, in orations, as follows: "The Tyranny of Public Opinion," T. E. Lyon; "Our Truest Friend," Miss Maude E. Knickerbocker; "Our National Progress Due to Invention," W. O. Lyon; "Student Fun," Miss Mary E. Lyman; "An Hour of Rest," M. W. McCrea.

THE EMBLAZONED SHIELD

George Edward Woodberry in the Sonnet

From what a far antiquity, my soul,
Thou drawest thy urn of light! what
other one
Of royal seed—yea! children of the
sun—
Doth so divinely feel his lineage roll
To the full height of man? the immortal
scroll
Of thy engendering doth from Plato
run,
Colonnos singing, Simols, Marathon!
Into thy birth such secret glory stole.
The kings of thought and lord of chivalry
Knighted me in great ages long ago;
From David's throne to lovely Galilee,
And Siloa's brook, my noble titles
flow;
Under the banners, Love, devout and
free,
Storing all time, thy child, I come
and go.

SUNFLOWERS

Not the least of the many things that we ought to conserve is brains.

So far nobody has invented a back spacer that will work on a human tongue.

A symposium is a group of ideas that won't stand alone, by a group of people who can't.

We hope that the war will make it fashionable for people to dress so that they will look human.

Perhaps we ought not to expect very much from these patriots who are not going to give themselves or their money until they feel that it is absolutely necessary. If we know anything about human nature, such people never feel that way.

FIND HIDDEN WHEAT

That the Russian food shortage, in part at any rate, was fictitious has been proved since the revolution, and prices have taken a decided tumble through the new republic.

Thousands of tons of wheat that were secreted by the former government have been brought to light, and, as may be expected, this has not lessened the feeling of bitterness toward the deposed government heads, the sentiment being that the populace had been tricked and cheated. Little regret is being expressed over the death of Rittig, minister of agriculture, who lost his life in the revolution, and who is regarded as responsible for a large measure of the chicanery regarding grain supplies.—Southwestern Grain and Flour Journal.

WORKING WITH BOYS

There are two or three things that one should bear in mind in beginning work with the boys. One is that he must have a definite idea as to what he wants to accomplish. He must know his work and not try to "put anything by" the boy. He is hard to fool. He knows, in some mysterious way of his own, whether or not you are sincere, and whether or not you have a real interest in him and his work. He may not be able to analyze this knowledge, but if you are not honest with him he will soon lose interest in his work without giving you or himself any reason for it. He just simply drops out. The matter is not worthy of his attention. You must be thorough and prompt. I think there are more failures from this cause than any other. The boy may not be any too good himself about keeping his appointments or following instructions, as this will depend on what kind of training he has had at home, but we have all kinds to deal with, and the boy who needs the help most should be the one we want to help; so we must never break a promise. Let him know and understand that you have a real interest in him and his work and finish what you begin.

If you have had some practical experience it will be of great help to you, as the boy likes to talk to a man who is really doing things, rather than with one who merely talks about it.—Poland China Journal.

AMONG THE ALUMNI

G. C. Smith, '16, visited college friends last week.

L. A. Maury, '16, is assistant manager of the Taft ranch at Gregory, Tex.

A. A. Anderson, '16, visited college Monday. He is now connected with the bureau of crop estimates of Nebraska.

Miss Virginia Sherwood, '12, has been reelected to teach home economics in the Lucas high school for the coming year.

R. O. Swanson, '13, has resigned his teaching work at Sherburn, Minn., to become county agricultural agent at Howard, S. D.

W. A. Hendershot, '04, '13, is teaching chemistry, general science, and American history in the high school at Gross Valley, Cal.

J. C. Ripperton, M. S. '16, has been appointed junior chemist of the bureau of soils, United States department of agriculture.

R. W. Getty, '12, was a college visitor Monday. He was on his way to Topeka to apply for a commission in the national guard.

Mrs. Helen (Myers) Droge, '13, and two children visited the college a few days ago. Mr. and Mrs. Droge are moving to Montana.

Dr. C. E. Goodell, professor of history in the college from 1900 to 1903, has been elected president of Franklin college, Franklin, Ind.

Wellington T. Brink, '16, who has been a reporter on the Cleveland (Ohio) Press, has resigned to become city editor of the Manhattan Nationalist.

A. E. McClymonds, '15, agricultural representative for the American Pipe Line company of Caney, has sent in his application for membership in the officers' reserve corps.

C. J. Burson, '01, cashier of the Hewins State bank, sends out a statement to his customers and friends this week showing the satisfactory condition of the business of the bank.

Joseph Sweet, who recently completed his work for the bachelor's degree in the college, is assistant in experimental breeding in the University of Wisconsin, where he is also taking graduate work.

R. W. Kiser, '14, has accepted a position in the animal husbandry department of the college. He will have charge of land and live stock aside from what is used for experimental purposes.

The Rev. Ray Anderson, '11, visited in Manhattan recently. He was ordained a short time ago to the Presbyterian ministry. He will be graduated this spring from McCormick Theological seminary, Chicago.

Paul Robinson, '16, visited college friends in Manhattan last Saturday and Sunday. Mr. Robinson's school at Formosa has been closed on account of an epidemic of measles, but he will resume teaching this week.

Miss Nell Beaubien, '16, is pursuing graduate study in home economics and journalism in the University of Wisconsin and has recently sold a number of stories. She is taking the work in journalism under Prof. W. A. Sumner, '14.

F. M. Wadley, '16, has accepted a position in the United States department of agriculture. He will do research work on truck crop insects. Since his graduation Mr. Wadley has been pursuing graduate study in entomology in the college.

Ed. H. Webster, '96, together with A. M. Ten Eyck of Rockford, Ill., and A. L. Sponsler of Hutchinson, all formerly connected with the college, were visitors here Thursday and Friday. Mr. Webster is now connected with a large dairy and creamery business in Oakland, Cal., and reports all well and prosperous with himself and family.

Miss Mildred Kittell, a former student in the college, has accepted a position in playground supervision under the auspices of the Redpath-Horner Chautauqua bureau. She will do work in the western states, from Wyoming to Texas. Miss Kittell has resigned her position in playground supervision at Newton to enter upon her new duties.

The Kansas State Agricultural College Alumni association of Kansas City, Mo., held its annual banquet at the Coates House, April 6, with 40 persons present. Dr. J. T. Willard, dean of the division of general science, and Albert Dickens, professor of horticulture, were guests of the association, and after dinner speakers. L. A. Fitz, professor of milling industry, was present for a part of the meeting.

DEATHS

JOHN H. GILL

John H. Gill, '13, died at El Paso, Tex., April 14, after being gored by an angry bull. He had recently become manager of the El Paso Dairy company, the largest dairy in the south.

MARRIAGES

BOYCE-SHAFFER

Miss Alice Boyce and Mr. R. W. Schaffer, '14, were married at the home of the bride in Kansas City, Mo., April 8. Mr. and Mrs. Schaffer will make their home in Washington, Kan.

RIGNEY-MIGLIARIO

Miss Ida E. Rigney, '09, and Mr. Fred C. Migliario were married at the home of the officiating clergyman, the Rev. Edward J. Culp, pastor of the First Methodist church, Topeka, Wednesday morning, April 11. Mr. and Mrs. Migliario left for a trip to New York, following which they will make their home in Topeka.

Mrs. Migliario taught domestic science since her graduation from college. For several years she was instructor in the college, resigning a short time ago.

GROW BEANS IN GARDEN AND INSURE FOOD SUPPLY

Surplus May Be Canned to Meet Winter Needs of Family, Suggests Dean Johnson

Grow a liberal supply of beans this season, can the surplus not used during the summer months and a palatable and nutritious food supply for the entire year will be assured, advises Edward C. Johnson, dean of the division of extension, Kansas State Agricultural college.

One quart of beans will plant a row 100 feet long and with careful cultivation a yield of 30 to 40 quarts may be expected. This amount will be sufficient to supply the needs of the average family during the summer, but with the prevailing high prices for all food products an additional amount, by all means, should be provided for canning, believes Dean Johnson.

Three hundred quarts of canned beans will go a long way toward making any family self-supporting, and any oversupply can be satisfactorily disposed of in the event of a food shortage. Full directions for canning may be secured by writing to the extension division, Kansas State Agricultural college, Manhattan.

Varieties of beans that are recommended for planting in this state are Field's first early, improved golden wax, stringless green pod, red valentine, black wax, and early six weeks. If shelled beans are desired the bush lima will give satisfactory results. The pinto, tepary, and other Mexican beans are adapted to the dry climates of southwestern Kansas, and will produce good yields. The pinto has given the best results.

Khaki uniforms for Uncle Sam's soldiers and tan shoes may in the future get their coloring from osage orange wood grown in Oklahoma. Carloads of osage orange wood are now being shipped from Oklahoma to eastern extract plants for use in making dyes.

MUST CARE FOR TREES

GROWER SHOULD GIVE CULTIVATION TO NEW PLANTINGS

Protection Is Necessary Against Sun, Wind, and Animals—Evergreens Especially Sensitive—Insects Must Be Kept Out

Trees planted this spring will demand as careful cultivation as any field crop. It is unreasonable to expect newly planted trees to compete successfully with native plants, according to Charles A. Scott, state forester. The cultivation need not be deep but must be thorough.

Newly planted trees require protection against injury by the sun, wind, and animals. Protection against injury by the sun and wind is required by the evergreens more than by the broad-leaved species, warns Professor Scott.

MAY TRANSPIRE TO EXCESS

Because evergreens are in full foliage when planted, there is danger that they will suffer from the effect of excessive transpiration. To guard against this a screen of some kind should be used. When only a few trees are involved, small boxes with their tops and bottoms knocked out or empty nail kegs will serve the purpose.

For extensive planting, as in groves and shelter belts, shingles or short pieces of light box boards from six to eight inches in width, driven into the ground a few inches from the tree on the southwest side, provide excellent protection. Some protection of this nature is necessary during the first month or six weeks after the evergreens are planted.

PROTECT TREES AGAINST RABBITS

The broadleaved species will require no special protection, except from rabbits. Their stems should be wrapped with burlap, grass, cornstalks, or wooden veneer tree protectors.

Live stock of all kinds must be rigidly excluded from the area occupied by young trees. Browsing off the tips of the branches and rubbing against the stems and trampling the ground around the trees cannot be permitted if successful growth is to be secured.

When leaf eating insects threaten, the trees should be treated with an arsenical spray. To protect against borers, the stems of the newly planted trees may be painted with a saturated solution of sal soda, to which enough laundry soap has been added to make a thick paint. Carbolic acid is then added to this mixture at the rate of one pint to 10 gallons. This should be applied frequently enough to keep the stems completely coated from the first of May to the middle of August during the first and second seasons.

AGRICULTURAL COLLEGE MEN BECOME SECOND LIEUTENANTS

Were Among Few to Pass Physical Examinations in Chicago

Keith Kenyon and John Sellon, seniors in general science in the Kansas State Agricultural college, and S. R. Vandenburg, a last year's graduate, successfully passed physical examinations given in Chicago and received commissions as second lieutenants in the United States marine corps.

Mr. Vandenburg went immediately to Washington, D. C., to receive further training before going into the service. Mr. Sellon and Mr. Kenyon returned to Manhattan on a furlough to complete their work at the Kansas State Agricultural college. Only eight men out of 28 passed inspection.

EVERY FARMER SHOULD KEEP FOWLS FOR EGGS AND MEAT

Kansas Farms Will Support Chickens on Waste Products

Every farmer should keep enough chickens to supply eggs and meat for family use, in the opinion of T. S. Townsley, assistant in poultry husbandry in the Kansas State Agricultural college.

"The average farm will support a considerable number of fowls on the waste products," said Mr. Townsley. "The flock is the only available supply of fresh meat during the summer for the average farmer, especially if he lives any distance from town. On many farms the proceeds from the sale of eggs during the laying season pay the grocery bill.

"Chickens are easily cared for on a farm where they have plenty of range. Little feed need be given except during bad weather when they cannot rustle. They can be taken care of by the farmer out of working hours or by the children or old people."

USE HENS TO INCUBATE SMALL NUMBER OF EGGS

Small Coops with Independent Runs Are Desirable, Says Superintendent of Poultry Farm

Natural incubation is advisable where only a few chickens are to be raised, according to N. L. Harris, superintendent of the Kansas State Agricultural college poultry farm.

"Less expense and trouble will be incurred if chicks are incubated naturally where only 50 or 100 chicks are to be raised," said Mr. Harris. "Although there are many arguments against the hen as a mother there has never been an incubator invented that will hatch as high a percentage of fertile eggs as the hen—provided she can be induced to stay on the nest during the entire period of incubation.

"Where only a few chickens are raised it is an easy matter to watch the hens and see that they always return to their own nests after getting off for feed or exercise. Where several hens are setting at the same time, however, it is almost impossible to avoid having two or more hens fight for the same nest. This allows part of the eggs to become chilled and a large number of them are likely to become broken during the fight over the nests.

"In order to avoid the difficulty caused by hens shifting from nest to nest or fighting with each other, small coops may be provided which have independent runs. These runs should be covered so as to prevent any hen from leaving her own enclosure. Many valuable settings of eggs may be saved in this manner.

"The use of hens for incubation eliminates the danger of chilling the chicks in their first few hours after hatching. Usually a hen will readily accept chicks of all colors. Occasionally, however, she will draw the color line and refuse to brood any except those suiting her fancy, killing all others. Raising chicks with the mother hen will do away with the necessity of teaching the chicks to eat."

One of the greatest evils of the use of a mother hen is the danger of lice, which cause the death of large numbers of baby chicks. All setting hens should be made louse free as far as possible by a liberal use of insect powder, Mr. Harris warns.

Whenever possible the nests for setting hens should be made on the ground. This will insure more healthy chicks. It is not necessary to have a large amount of nesting material. The material used for nests should be clean and fresh and should be shaped so as to conform somewhat to the shape of the hen's body. If the nests are too deep there is danger that the eggs will pile up and not get even heat.

Occasionally a hen decides that she has given a sufficient amount of time for incubation and will absolutely refuse to return to the nest. A fussy hen will often step on and kill a large number of her newly hatched chicks.

No special care need be taken of the hen during the incubation period except that she should not be given anything sloppy, but rather corn and other heat producing feeds.

George O. Greene, specialist in horticulture, division of college extension, went to Chase county Saturday to assist P. E. Hale, county agent, in orchard demonstration work.

IT PAYS TO BLIND-PLOW

EARLY CULTIVATION NECESSARY IN SUCCESSFUL POTATO GROWING

Producers Must Use Pains-taking Methods in Order to Insure Profitable Returns on Investment, Says Professor Merrill

The high cost of seed potatoes has resulted in a heavy individual outlay, and potato growers must use pains-taking methods in order to secure profitable returns on their investments, asserts F. S. Merrill, assistant professor of horticulture in the Kansas State Agricultural college.

"Growers who are most successful are usually those who practice the most intensive methods of soil preparation followed by thorough cultivation during the growing season," said Professor Merrill. "The system followed by many of the successful growers is to blind-plow the field before the sprouts appear above the surface of the ground or to stir the ground thoroughly with a spike tooth harrow, following this with a weeder to loosen up the ground and kill young weeds."

CHECK WEED GROWTH EARLY

It is essential that the growth of weeds be checked before they are well established and for this reason there should be careful cultivation during the early part of the season, pointed out Professor Merrill.

Soon after the sprouts come up the ground should be cultivated with a six shovel cultivator. The depth of all plowing should be regulated by the development of the roots and tops. Early cultivation should be deeper and the ground may be worked closer to the hill than is possible in later workings. This cultivation should be continued until there is danger of injuring the vines.

LAST CULTIVATION IS IMPORTANT

At this time, or when the vines have covered approximately two-thirds of the distance between the rows, the crop is ready to be laid by. For this purpose either a one-horse plow with moldboard shovel or a five tooth cultivator, with the hiller, should be used. The object of this last cultivation is to cover the base of the plants with two or three inches of soil, aid in the drainage of excess surface water, and protect the developing tubers from exposure to the sunlight.

Soil that is kept in a light, porous condition is favorable for the development of tubers. Weed growth should be checked as early as possible in order to produce better crops of better quality.

KANSAS AGGIES WIN FROM STATE NORMALS AT EMPORIA

Local Team Has Been Handicapped by Lack of Practice

The Kansas State Agricultural college baseball team defeated the State Normal nine at Emporia, Monday afternoon, 8 to 3. The next game in which the Aggies will participate will be with Bethany College at Manhattan, Friday.

The Aggies lost the first two games of the season to the University of Missouri on the home grounds last week. The scores were 11 to 3 and 6 to 1. The college team has been handicapped by lack of practice due to adverse weather conditions.

LOUISVILLE WILL BUY CATTLE AND IMPROVE DAIRY BUSINESS

Walter Burr Starts Important Community Work—Neale to Help Select Stock

Walter Burr, director of rural service, division of college extension, spent the last week on community dairy work in Louisville. Through Mr. Burr's efforts, three men from Louisville will go to Wisconsin Monday to buy 100 Holsteins to distribute in that community. A. S. Neale, specialist in dairy husbandry in the division of college extension, who is now in Wisconsin, will assist in selecting the cattle.

CHANCE TO SAVE MILLION

TREATMENT OF SORGHUM SEED WILL PREVENT HEAVY LOSS

All Varieties Except Milo and Feterita Are Subject to Attack by Smut. Points Out Plant Pathologist—How to Destroy It

Treat sorghum seed to insure the summer crop against plant disease losses and save more than \$1,000,000!

Loss in Kansas through kernel smut will be enormous in 1917 unless preventive measures are adopted by farmers generally in the state, according to L. E. Melchers, plant pathologist, Kansas State Agricultural college.

GOOD SEED IS SCARCE

Good sorghum seed is not plentiful, and unless all precautions are taken the crop will be greatly reduced. All the sorghums, such as kafir, broom corn, shallu, and kaoliang, are affected by smut. Seed should be treated by one of the ordinary methods to prevent this plant disease. Milo and feterita are the only varieties of sorghums that are not susceptible to smut, hence they do not require a treatment.

The formaldehyde-formalin-treatment, and the hot water treatments are both effective, although the former is probably the more commonly used, since it is more readily carried out on a large scale.

TO TREAT WITH FORMALIN

In preparing the formaldehyde solution mix one pint of full strength formaldehyde with 30 gallons of water in a suitable vat, tank or barrel. The seed to be treated should be placed in coarse sacks—gunny sacks—and plunged into the solution for a moment, then raised, allowed to drain slightly and the process repeated until it is certain that all the grain is wet.

The sacks of seed should remain in this solution for one hour. At the end of this time the sacks and their contents should be removed. The seed should be spread out in thin layers on a clean floor or canvas, free from smut contamination and allowed to dry. After it is thoroughly dry it may be stored in clean sacks, or it may be immediately planted.

STORE SEED IN NEW SACKS

In order to eliminate all possibilities of contamination, after the seed has been treated, new sacks should be used for storing the seed, or the sacks should be soaked for a period of two hours in the solution employed for treating the seed for smut.

It is advisable to sprinkle the floor with a strong solution of formaldehyde before spreading the seed to dry. Care should be taken that bins and drills are free from smut spores by sterilizing them through washing with a strong solution of formaldehyde. The germination of treated seed should be tested, and if the germination is low, the rate of planting should be proportionately increased. Precaution should be taken against freezing and sprouting after the treatment, warns Mr. Melchers.

TREATMENT WITH HOT WATER

Although the hot water treatment is efficient in ridding the contaminated seed of smut spores, it is a little more difficult to perform effectively and requires considerable care. The equipment necessary is also a matter to be considered. Except where steam is accessible, the formaldehyde treatment is easier to carry out.

A small steam boiler or traction engine is the ideal thing for carrying out the hot water treatment. By means of steam, the water is heated to the desired temperature. The additional apparatus necessary for the hot water treatment consists of two accurate Fahrenheit dairy thermometers, three barrels, tanks or vats, and gunny sacks. The barrels should be numbered 1, 2, and 3. The temperature of the water in barrel 1 should be 120 degrees, while that of barrel 2 must be kept between 134 and 140 degrees. Barrel 3 is a cold water supply.

Two half inch pipes should be run from the main steam pipe to a place directly above barrels 1 and 2. It is best to attach pieces of hose, which

should lead into the barrels, to the ends of the half inch pipes. This gives flexibility, and the hose may be easily taken out of the barrels if necessary. Shut-off valves should be provided at the ends of the half-inch pipes. By means of these, the volume of steam can be regulated, thereby heating the water to the desired temperature. The entire process can be carried out by one man.

ALLOW ROOM FOR SWELLING

The seed to be treated is placed in the sacks, but not more than half a bushel of seed should be treated at one time. More than sufficient room should be allowed in the sacks for the swelling of the seed. The sacks and their contents are first dipped into barrel 1 for a moment, raised and allowed to drain slightly and the process repeated, until it is certain that the seed is thoroughly wet. This will raise the temperature of the seed to within a few degrees of the temperature of the water in barrel 2, thereby preventing the temperature of the water in barrel 2 from being lowered when the sacks of seed are placed in it for the treatment. The temperature of the water in barrel 2 must be kept within the range of limits, namely, 134 to 140 degrees.

The seed is kept in this hot water—barrel 2—for 12 minutes. Cold water may be added if the temperatures approach the danger mark. At the end of the stated time, the sacks should be removed and the grain spread out in thin layers and allowed to dry. If the seed is not immediately spread out, it should be plunged into barrel 3—cold water—for a few minutes. This will reduce the temperature of the seed, otherwise injury would result from the prolonged high temperature.

STEAM IS MOST EFFECTIVE

As previously stated, the most effective and accurate method of applying the hot water treatment on a large scale is by means of steam. By careful manipulation, however, it is possible to treat seed for smut by means of the hot water method, even though steam is not available. The process is the same as already described, but it is necessary to make provision for heating the water. A supply of cold water is also necessary. The temperature of the treating bath is regulated by adding hot or cold water as required. The larger the barrels or vats, the easier it is to regulate the temperature of the water.

ONIONS ARE PROFITABLE IN THE KITCHEN GARDEN

May Be Started in Three Different Ways. Points Out Prof. M. F. Ahearn—Guard Against Thrips

Onions are a profitable crop to grow in the kitchen garden, according to M. F. Ahearn, associate professor of horticulture in the Kansas State Agricultural college.

"Onions may be started in three different ways—seeds, bottom and top sets, and multipliers," said Mr. Ahearn. "The early onions for the table are usually grown from sets. These sets may be procured in red, white, or yellow varieties.

"Seed onions may be drilled in rows 12 to 14 inches apart. The seed is sown thickly and after they are well started they are thinned to three or four inches apart. Onions sown in this way are ready for harvesting usually in August. They should be dug and stored in a cool dry place or marketed as soon as harvested. The best varieties are prizetaker, Red Wethersfield, yellow, red and white Globe Danven and Silver Skin. Giant Gibraltar is a good variety of the larger varieties and is mild in flavor.

"The winter onions are usually grown from multipliers, which are propagated by division of the bulb.

"The principal insect enemy of the onion is the thrips. It attacks the top of the plant, and causes a considerable decrease in the yield. The plants should be watched closely for this insect. In case of infestation the plants should be sprayed with black leaf 40."

GOOD CROP FOR WEST

FETERITA IS RECOMMENDED FOR ARID DISTRICTS OF KANSAS

This Plant Will Grow When All Others Fail—Makes Good Silage and Dry Forage—Must Be Harvested Promptly

Feterita is one of the best forage crops that the western farmer can plant, according to Ralph Kenney, assistant professor in crops in the Kansas State Agricultural college.

"Feterita is well adapted to the arid districts in the western part of the state," said Professor Kenney. "It can be relied upon to furnish a crop of dry forage for the stock when every other crop has failed. In the high-land districts of eastern Kansas, it is grown with great success. In the southeastern section it may be used as a catch crop after oats have been planted.

"The seedbed is easily prepared. It is usually sufficient to disk harrow the corn stubble and plant the feterita directly. The best results have been obtained by drilling at right angles to the harrowing. This manner of planting will pulverize the ground better and place it in good condition to conserve moisture.

GROUND SHOULD BE WARM

"The feterita seeds should not be planted until the ground is thoroughly warm because the seed is soft and it will rot readily if it does not have a chance to germinate when planted. This is the case with all of the soft seeds of the kafirs, but feterita is more susceptible to rot than any of the other varieties."

Use from two to four pounds of seed to the acre in planting in western Kansas, advises Professor Kenney. In the eastern section of the state four to six pounds of seed should be used to the acre. The germination test is important with feterita seed, as it determines definitely the quality of seed to be planted. Feterita is more apt to heat in storage than any of the other kafirs and the germ in the seed is in many cases dead because of this heating. A germination test of all seed will repay the planter for his trouble.

WHEN TO PLANT FETERITA

The time of planting varies according to the condition of the ground, but tests have shown that feterita may be planted in the western counties as early as May 10 to 15; in the southern portion of the state, from May 10 to 20; in the eastern upland regions, May 20. No attention need be paid to the crop after it has once been planted until it is ready to harvest.

Feterita should be harvested immediately because of its tendency to shatter. A large per cent of every crop of feterita is lost through shattering caused by allowing the crop to stand in the field after it is ripe.

The juices of the feterita are not as sweet as the other kafirs but it has been found to make good silage and dry forage.

RAPE STANDS JUST BELOW ALFALFA FOR HOG PASTURE

Dwarf Essex Variety Should Be Planted—Grows Anywhere in Corn Belt

Rape is next in value to alfalfa as a hog pasture, in the opinion of Ray Gatewood, instructor in animal husbandry in the Kansas State Agricultural college.

Rape will grow anywhere in the corn belt if there is plenty of moisture. The dwarf Essex variety should always be planted, believes Mr. Gatewood, as it is not so coarse and is more succulent than the larger varieties. Rape may be used as a catch crop. If planted now it will furnish good forage until dry weather sets in, at least.

LETTUCE AND RADISHES IN EVERY VEGETABLE GARDEN

Horticulturist Tells How to Plant and Grow Them for Best Results

No vegetable garden is complete without lettuce and radishes.

Cover radish seed with half an inch of soil, is the advice of M. F. Ahearn,

associate professor of horticulture in the Kansas State Agricultural college. In order to have a continuous supply new beds should be planted every three weeks. Radishes do not do well in hot weather.

The best varieties to plant are early scarlet turnip, icicle, and early scarlet turnip white tip. For later plantings sow white Strassburg and white Vienna.

The culture of lettuce is essentially the same as that of radishes. The lettuce plants, however, should be thinned to stand eight to 10 inches apart. The best varieties for Kansas are Grand Rapids, early curled Simpson and improved Hanson. Good varieties of head lettuce are big Boston and California cream butter.

HIGH HOG PRICES DON'T WARRANT SALE OF SOWS

Breeding Stock Should Be Retained—A Little Grain May Be Fed with Profit Despite Cost

Don't ship the sows to market this spring or next summer, but use them for fall litters, is the advice of Carl P. Thompson, specialist in animal husbandry, division of extension, Kansas State Agricultural college.

"A large increase in hog production not only will help to supply the much needed food both in this country and the other countries at war but will also be profitable to those producing them," said Mr. Thompson. "While the sow is regaining her flesh this summer and raising the spring litter she should be developing the fall litter. Some of the best fall gilts should be saved and bred. The high price of hogs does not warrant the selling of breeding stock.

"Good alfalfa pasture is valuable to every hog breeder, but with the alfalfa pasture a little grain can be fed with profit even at the present high price of grain."

BEEKEEPING PROFITABLE AS EXCLUSIVE BUSINESS

Brings in Large Returns on Money Invested. Points Out Dr. J. H. Merrill of Agricultural College

The men who are engaged in honey production as an exclusive business are getting results equal to those derived from any other form of agriculture, with less capital invested and with less risk, according to Dr. J. H. Merrill, assistant professor of entomology in the Kansas State Agricultural college.

"The fact that it requires far less capital to engage in beekeeping than in general farming is a strong point in favor of the industry," commented Doctor Merrill.

"As an exclusive business, beekeeping requires high grade talent. It looks so simple and easy that those who engage in it are not willing to take the time to master the work in all of its details as they would in any other line of business. For this reason comparatively few persons succeed in making it profitable."

Fifteen years ago there were more beekeepers than there are today but there has been an increase in the number of bees kept, Doctor Merrill pointed out. This plainly indicates that the beekeepers are becoming specialists.

Judging from the incomes of some of the men who are depending upon beekeeping as a livelihood, it is safe to say that any man who is willing to become thoroughly proficient and to attend to his bees as a business investment, can make from \$1,200 to \$3,000 a year from bees that he can care for personally. While these figures may seem high, they are a conservative average of the incomes of a large number of exclusive beekeepers.

One of the most interesting demonstration orchards in Kansas is in charge of the Dickinson County High school, according to T. H. Parks, specialist in entomology, division of extension, Kansas State Agricultural college. This orchard has been carefully pruned and under the direction of Mr. Parks will be sprayed four times this season, the students assisting in the work.

WATCH FOR PLANT LICE

THEY ARE FIRST OBSERVED ON TENDER SPRING VEGETATION

Much Damage May Be Done Before Gardener Is Aware of Their Presence—George A. Dean Gives Methods of Combating Pest

It is time to guard against plant lice, according to George A. Dean, professor of entomology at the Kansas State Agricultural college. The same climatic conditions which bring up the garden plants are also favorable for the lice.

Plant lice are small, soft bodied, greenish insects that suck the sap from the leaves and cause them to dry up and die.

"One must not think," said Professor Dean, "that because the lice are so small they are insignificant and will not injure vigorous plants. If they were only in small numbers they would not be serious, but when millions upon millions of them are at work and when the whole lower surface of the leaves is covered, the plants are soon killed.

WORK IN EARLY SPRING

"In the early spring many of these plant lice may be living on the weeds and grasses growing around the garden but when the garden truck comes up they make their way to these plants and begin their advances. They increase rapidly and if the grower does not watch his garden closely the lice will get a start and do much damage before he knows they are at work."

To eradicate the lice, they should be thoroughly sprayed with either black leaf 40, or a strong soap solution as soon as they are discovered, pointed out Professor Dean. The black leaf 40 is prepared by dissolving three-fourths of a pint of black leaf and four pounds of common laundry soap in 100 gallons of water. The soap spray is made by dissolving one pound of laundry soap in six gallons of water.

HOW TO APPLY SPRAY

In applying either of the sprays, it is essential that it should be done in such a manner that it will strike every insect. It must be applied by the use of a spraying apparatus, and when there are several plants the common knapsack sprayer is the best. The extension rod furnished with this sprayer should be replaced by one long enough to reach from one's hand to the ground without stooping. For spraying vines it should have the lower end turned up at an angle of 45 to 90 degrees and capped with a fine holed nozzle. With this equipment the spray can be easily and thoroughly applied to the under side of the leaves where the lice congregate.

FEED COWS IN MIDSUMMER TO KEEP UP MILK FLOW

An Acre of Early Corn and Another of Peas Will Feed 10 Animals Throughout August

That it will pay every Kansan who is milking cows to plan to feed the animals in midsummer when the pastures are dry in order to keep up the milk flow, is the opinion of A. S. Neale, specialist in dairying, division of extension, Kansas State Agricultural college. Dairy products will be worth as much, if not more, than in previous seasons.

A little summer silo would answer the purpose admirably, but practically no one has any silage left over, pointed out Mr. Neale. An acre planted to the earliest variety of corn, such as pride of the north, or a standard sweet corn, and another acre to cow peas will feed 10 cows throughout August and give big cash returns for that month, as well as keep the cows in milking condition for the months to follow—a thing of great importance.

Cowpeas should be broadcasted at the rate of one bushel to the acre, May 1 to May 15 in the southern part of the state and two weeks later in the northern sections. Whippoorwill is one of the best varieties to plant for soiling purposes.

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TO SPRAY COSTS LITTLE

POTATO CROP INSURED FOR 75 CENTS AN ACRE

Proper Methods Will Control Blight and Insect Pests—Work Should Be Begun Early to Keep Destructive Agents from Getting Start

That it will pay Kansas farmers to insure the potato crop by spraying with Bordeaux mixture to prevent loss through blight, is the opinion of F. S. Merrill, assistant professor of horticulture, and L. E. Melchers, plant pathologist, in the Kansas State Agricultural college. Spraying will not cost 75 cents per acre.

It will soon be time for the first spray to prevent the early blight, say these specialists. This fungous disease attacks the foliage of the potato, causing black or brownish spots which have very fine concentric rings or circles, giving the spot a "target-board" appearance. The spots vary in size, frequently uniting and forming irregular blotches. The destruction of the food manufacturing power of the leaves is greatly reduced by such an attack and as a result the leaves dry, the plant ceases to grow, and tuber formation is prevented.

IT'S IMPOSSIBLE TO CURE

It is best to spray and prevent this disease from getting a start. Experiment shows that one cannot cure this disease if it once gains a foothold, and therefore all possible protection should be given the plants.

Spraying with Bordeaux mixture, using the 4-4-50 strength, will prevent epidemics of this disease. In order to attain the best results, sprays should be given at intervals of a week or 10 days, beginning when the plants are six inches high. Since this disease becomes established during the earlier part of the growth of the plant, the earlier sprays are important. The Bordeaux sprays should be continued well up to the flowering stage. If the weather continues dry up to the time when the plants begin to show the flower buds, spraying for this disease will not be so necessary. Insects such as the flea beetle, are important in spreading this disease.

COMBINATION SPRAY USEFUL

Since it becomes necessary to spray for the insects attacking the potato foliage, arsenate of lead at the rate of three pounds to 50 gallons of Bordeaux mixture makes a combination spray which will control both the plant diseases and the biting insects. Such a combination spray should be used as often as it appears necessary to keep the plant thrifty and free from blight and eating insects.

The Colorado potato beetle is the most serious insect pest that attacks the potato plants. The insect winters over as an adult beetle and usually appears soon after the plants have come through the ground. The female deposits the eggs in clusters on the under surface of the leaves. These hatch in a week, the larva being spotted red and yellow.

MAY DESTROY WHOLE FIELD

The adult beetles often do serious injury, but the worst damage is usually done by the larva. They possess keen appetites and in a few days, the entire field may be destroyed.

At this time, spraying is the only effective method that can be practiced. The use of the dust or dry sprays is increasing rapidly, as this method has many advantages over the liquid sprays and is equally, if not more, efficient for controlling this insect. No dust spray, however, has been found effective in controlling the blight, and a liquid sprayer must be used for this purpose. The liquid spray should contain three pounds of arsenate of lead to each 50 gallons of Bordeaux mixture. This spray should

be used just before the eggs hatch and applied with a sprayer which gives a good pressure.

OTHER INSECTS SOMETIMES APPEAR

Other insects that are occasionally found, but seldom do serious injury, are the flea beetles and the blister beetles. The former are small, active beetles that perforate the leaves. The use of the Bordeaux mixture acts as an efficient repellent for this insect.

The blister beetles are more difficult to control, but a spray composed of one-half pound of Paris green to 50 gallons of Bordeaux should be applied when the beetles appear.

Some farmers believe they have invested all the money they can afford in the seed and therefore may not use the sprays. Figured at the average labor cost, the entire investment, including seed, will be more than \$50 an acre and this does not include harvesting. Spraying costs less than 75 cents an acre.

WILL REPRESENT KANSAS AT IMPORTANT MEETING

President Waters Is Appointed Delegate to Conference on Defense Plans at Washington

Dr. Henry Jackson Waters, president of the college, has been appointed by Governor Arthur Capper to represent the Kansas council of defense at a special conference in Washington Wednesday, May 2.

The meeting will be attended by the members of the national council of defense and by a representative of each state council. The purpose is to make plans and to correlate the activities of the organizations.

BEANS IN GARDENS, NOT AS KANSAS FIELD CROP

Dr. W. M. Jardine Points Out Greater Value of Corn and Kafir for General Planting

Beans are a garden vegetable rather than a field crop for Kansas, points out Dr. William M. Jardine, chairman of the agricultural production committee of the state council of defense. "Beans are not a dependable crop to grow on a field scale in Kansas," said Doctor Jardine. "String beans as a garden vegetable or a few shell beans for home use should be grown by every family, but the production of these crops on a field scale should not be attempted as our climate is not well adapted to their growth. We have grown beans of the Mexican or pinto variety for the past five or six years in coöperative tests with farmers, and they have never made any money except in rather favorable years.

"With more than usual rainfall and when the summers are cool, they do fairly well in the western half of the state. For example, in 1912 and 1915 they produced fair crops, but even in these years there was more money made out of staple crops, such as kafir and corn. In other words, when we can produce a good crop of beans in this state, we can produce a better crop of corn and kafir.

"Twenty pounds of shell beans are required to plant an acre. At present market prices the seed for an acre will cost \$4, which is more than the entire crop may bring if the season is unfavorable. We are short of labor, of team power, and of money, and we cannot afford to take a chance of losing the use of our land by experimenting."

HOME ECONOMICS SPECIALIST TO HOLD DRESSMAKING SCHOOL

Miss Baird and Miss Wright Will Conduct Work at Caldwell

Miss Mary M. Baird, instructor in the home study department in the division of extension, Kansas State Agricultural college, will go to Caldwell Monday to assist Miss Mary Wright, specialist in home economics in the division, in conducting a two weeks' dressmaking school at that place.

FEED FOR EGGS EARLY

HENS WILL NOT LAY HEAVILY IF THEY ARE STUNTED

Chickens Must Get Proper Sustenance Throughout Summer if They Are to Produce in Winter Months, Says Poultry Superintendent

Pullets that are stunted by poor feeding during the first few weeks of their lives will prove a decided disappointment from the standpoint of their egg production, according to N. L. Harris, superintendent of the Kansas State Agricultural college poultry farm.

"If an abundant supply of eggs is to be expected next fall and winter, the young pullets must be fed from the first with this in mind," said Mr. Harris. "There is always shortage of eggs in the early fall and winter due largely to the fact that the care and feeding are not properly attended to during the early life of the chick.

SHOULD GET GOOD RATION

"Hens do not consume feed one day to manufacture it into eggs the next. Chicks should be fed a good ration throughout the entire year instead of being allowed to hustle for themselves after they have attained a weight of two or three pounds. It is practically impossible to induce the hens to lay during the cold winter months unless they have been well developed and started to laying during the pleasant fall weather.

"The early hatched pullets of the smaller, more active breeds mature rapidly and often begin laying in August or September. These birds will not make good winter layers as a rule. They usually lay from 16 to 30 eggs and begin to molt the first week or two in January. Chicks hatched in April or May from the light breeds will begin laying in October or November and continue throughout the entire winter. The heavier breeds should be hatched previous to this and kept growing by a liberal supply of the best of feed.

FEED SCARCE ON RANGE

"It is necessary to feed during the hot, dry months of the summer. Bugs and worms are scarce at this time of the year and during drouthy seasons weed seeds are often scarce. The scarcity of feeds for chickens on the range during the summer often accounts for the scarcity of eggs during the fall and winter."

Where possible the growing chicks should be given an abundant supply of milk, pointed out Mr. Harris. This should be supplemented by a mash composed largely of wheat bran. In the ordinary year it is probably not necessary to feed the chicks much grain after they have attained a size of three or 3½ pounds.

Late hatched pullets of all breeds, if expected to make a good egg record the next winter, must be forced by a liberal supply of feeds high in protein such as milk, and commercial beef scrap. Plenty of fresh water is necessary to the best development of the laying chick.

MORE PORK PRODUCTION TO BENEFIT FARMER AND OTHERS

Owner Will Be Repaid for Care Given to Sow and Pigs

By producing as much pork as possible this year the farmer not only will help feed the nations but can benefit himself financially as well, asserts Carl P. Thompson, specialist in animal husbandry, division of extension, Kansas State Agricultural college.

"Spring pigs which have arrived in April should be given every possible care," said Mr. Thompson. "Efforts should be made to save as large a percent as possible of those that are still to be farrowed.

"The sow should be in good condition. She should be put on green

pasture as soon as possible or given alfalfa hay until grass comes. If alfalfa hay or clover hay is not available, bran, shorts, and oil meal or tankage should be fed. A good ration, where alfalfa is not available, consists of 70 per cent of corn, 25 per cent of shorts and bran in equal amount, 2½ per cent of oil meal, and 2½ per cent of tankage. Most of the corn should be taken from the sow at least three days before she is to farrow."

SWEET POTATO ACREAGE MAY WELL BE DOUBLED

Many Parts of State Are Especially Suited for this Crop—Fruit Shortage Is Likely

The acreage of sweet potatoes in Kansas should be doubled this year, assert members of the department of horticulture in the Kansas State Agricultural college. Growers of Irish potatoes have reduced their acreage by a good many acres, they point out.

In the sandy lands along the Kaw, the Arkansas, and the Republican, in the sand dunes around Abilene and Solomon, and on the sandy ridges in Montgomery, Labette, and Wilson counties are thousands of acres of land suitable for the growing of sweet potatoes. In these sections are many successful growers. The cost of seed is not exceedingly great, and the acreage may well be increased.

It is not expected, warn the horticulturists, that the inexperienced grower will make a plunge this year, but if each grower and farmer living on suitable land will increase his acreage, however little, much may be done to equalize potato prices this fall and winter. Every indication is for prices high enough to insure a profit.

Each grower should provide himself with some sort of warm, dry storage facilities. The prices of farm products at harvest time, when the majority of farmers sell, is always low. A storage for any product may easily pay for itself the first year.

The department of horticulture desires the names of persons who can supply sweet potato plants, the varieties available, and the number. A list of those who wish to raise sweet potatoes is also desired.

Many gardeners and growers are beginning to worry about injury to trade because of garden enthusiasm in small towns. This will be true to a great extent only as to the early vegetables, say horticulturists. Very few office people and laborers care to get out early in the morning or late at night during July or August. It must also be remembered that vacations are taken from June to September and during the vacation weeds grow rapidly. To offset the vegetables grown at home, moreover, is the determination of each family to can fruits and vegetables in the home more than ever before. This will increase demand.

This year promises a shortage in many sorts of fruits. Because of the high prices during the past year much attention will be given during the present season to home canning and preserving.

BREWER SUCCEEDS BOYER AS EDITOR OF STUDENT PAPER

Journalism Student Elected to Important Place on Kansas State Collegian

Bruce B. Brewer of Manhattan is the new editor of the Kansas State Collegian, the student newspaper. He succeeds Arthur W. Boyer of Scranton, who resigned to accept a position on the Manhattan Mercury.

Mr. Brewer is a sophomore in the course in industrial journalism, where he is making an excellent record. He has had experience both as a member of the Collegian staff and as a reporter on down town papers.

GRASSES HOLD BIG PLACE

HAVE IMPORTANT PART IN KANSAS CROP ROTATION

Moisture Requirements and Adaptation to Soil Should Be Considered in Choosing Variety—Combinations for Various Parts of State

Grasses have an important place in efficient crop rotation in Kansas, according to Ralph Kenney, assistant professor of crops in the Kansas State Agricultural college.

"Timothy, Kentucky blue grass, meadow fescue, redbud, brome, orchard, Bermuda, and tall oat grass have a general adaptation to farm crops," said Mr. Kenney. "Usually these grasses should be sown in combination with one or more of the legumes, such as alfalfa or clover, because this improves the condition of the soil and adds nitrogen."

In choosing the variety of tame grass to be sown, attention should be paid to its moisture requirements and its adaptation to the particular soil in which it is to be planted, advised Mr. Kenney.

MIXTURES FOR EASTERN KANSAS

Combinations of grasses and the amount per acre that can be grown to advantage in eastern Kansas are eight pounds of timothy and two pounds of mammoth or alsike clover; 12 pounds of orchard grass and eight pounds of red clover; 10 pounds of brome grass and eight pounds of red clover; five pounds of brome grass, five pounds of orchard grass, and six pounds of red clover.

A desirable mixture for southeastern Kansas is six pounds of redbud, six pounds of meadow fescue, and six pounds of orchard grass. For north central Kansas a good combination is 10 pounds of brome grass and 10 pounds of alfalfa. None of the tame grasses have succeeded in western Kansas except when planted in the creek bottoms.

AMOUNTS FOR SOWING ALONE

The usual amounts of seed per acre when sown alone are 12 pounds of timothy, 2½ pounds of Kentucky blue grass, 20 pounds of orchard grass, 12 to 15 pounds of meadow fescue, 14 pounds redbud, 20 pounds of brome grass, 25 pounds of tall oat grass, 10 pounds of red clover, 10 pounds of mammoth clover, six pounds of alsike, 12 to 15 pounds of alfalfa, according to Mr. Kenney. When two or more varieties are sown together it is best to sow at a slightly increased rate.

FRANK ALVAH PARSONS TO SPEAK AT COLLEGE

Noted Authority on Applied Art Will Give Two Addresses Here Next Week—Is Well Known Author

Dr. Frank Alvah Parsons, president of the New York School of Fine and Applied Arts and also a member of the faculty of the New York university, will speak here Wednesday and Thursday of next week. He will make an address in the auditorium at 4 o'clock Wednesday afternoon under the auspices of the department of home art. He will discuss problems connected with art in the household.

On the following morning he will make an address in student assembly. Both lectures will be open to the public.

Doctor Parsons is probably the leading authority in the United States on applied art. His suggestions have revolutionized the advertising of several great commercial firms. In the fields of printing and of home design, his work has likewise been highly effective. He is the author of "Principles of Advertising Arrangement," and is a frequent contributor on art subjects to leading magazines.

THE KANSAS INDUSTRIALIST

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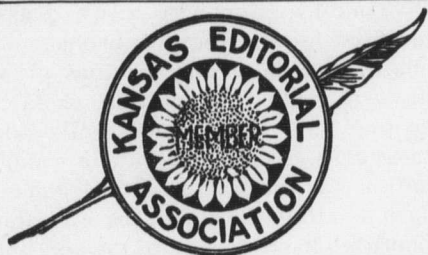
H. J. WATERS, PRESIDENT Editor-in-Chief
N. A. CRAWFORD Managing Editor
J. D. WALTERS Local Editor
ADA RICE, '95, M. S. '12 Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

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WEDNESDAY, APRIL 25, 1917

STRESSING KANSAS' WORK

The statements of Arthur James Balfour, head of the British high commission now in this country, give added weight to the opinions of those who have stressed the importance of the work of Kansas in the war.

Mr. Balfour points out that the furnishing of food to the allies is one of the greatest services that the United States can perform. This country, with its rich agricultural resources, must feed not only its own people but its allies who are fighting the battle of democracy in the trenches of Europe. In this no state should excel Kansas.

Some of the steps that will give Kansas this enviable place in national defense are these:

Planting only such crops as have proved successful under Kansas conditions.

Testing seed.
Using methods of cultivation that have proved best.

Giving boys and girls a chance to do gardening and canning.

Preventing waste of vegetables, fruit, and other products.

These are simple, practical measures. They will go a long way toward the winning of the war.

VISION THAT WILL COUNT

The press is of incalculable service in promoting every public enterprise. Why shouldn't it be likewise of real service to a nation at war? This is the evident attitude of George Creel, newspaper man and magazine writer, recently appointed executive director of the committee of public information by President Wilson. The Editor and Publisher quotes Mr. Creel as writing:

"It is obvious, of course, that I can not as yet speak in specific terms. The matter is too closely concerned with free institutions to permit of snap decisions and half-baked rules. There are, however, certain fundamental policies that may be declared, and which will, I trust, carry some measure of reassurance.

"There is not a newspaper in the United States that is without earnest desire to do the thing that is best for America. It is upon this theory that I mean to base my policies and official actions. Whatever may be the needs of the future, I cannot see present necessity for any policy of rigid repression. Rather is it the case that every proper channel of information must be opened so that the people may not lack in knowledge and understanding.

"I have no intent to interfere with the freedom of the press, to usurp functions of private ownership, or to inaugurate any system of petty, hampering, and irritating supervision. The mistakes of European censorships will be avoided. I may say to you that I am going to be more proud of what I do not do than what I do. Such rules and regulations as may be

necessary will be framed with a view to appealing to the intelligence and patriotism of the press, not merely to a fear of penalties. Cooperation is the vital need, not grudging submission to resented orders.

"War is not entirely a matter of armed force. Public opinion is a factor in victory no less than ships and guns, and the creation and stimulation of a generous, ardent, national sentiment is the kind of fighting that the press alone can do. It is my conviction that every newspaper owner, editor, or writer is eager for this service, and I hope to be able to aid in its fullest expression."

Everyone who knows of Mr. Creel's character and his past work knows that he means what he says. His plans show broad yet practical vision—a vision that is bound to be of enormous service to a nation in a great war.

THE FARMER AND THE WAR

There is a world shortage of food. Forecasts indicate short crops this year.

Breeding herds are being depleted. This forecasts a shortage of meat. Are we confronted with a world famine?

If the world is fed the American farmer must do it.

He will render his country as patriotic a service as the man who fights in the trenches.

There is no danger of overproduction.

Wheat, corn, potatoes, and beans are especially needed.

Oats, barley, sorghum, and buckwheat furnish bread substitutes.

Uneconomic speculation and price manipulation should be abolished.

Waste in distribution should be eliminated.

Market grades should be established.

Publicity should be given to prices. The farm labor problem is serious.

Should we enlist an industrial army?—C. W. Pugsley in the Nebraska Farmer.

THE FARM LABOR PROBLEM

Getting the work done has been a big and vital problem on our farms for a good many years, ever since the vast development of our commerce and industries. It is going to be a bigger problem this year than ever before. Big wages will continue to be paid in the cities and towns. The army and navy are right now calling for hundreds of thousands of men, they are calling men from the farms as well as from the towns. All this will increase our always big labor problem. To offset it we must use more and better machinery; must plan our work so as to do it with the least possible work, and still do it well; must plan our work so it will not all come in a heap. This means a careful arrangement of the crops and the live stock work so they will interfere with each other as little as possible. We would not hinder the proper enlistment in our navy and army, but we do want to call attention to the fact that patriotism often keeps one out of the army as well as takes others into it. The patriotic thing to do is the thing which will serve the country most. Those at home and those at the front must be fed and clothed, and the things needed for these purposes must come from American farms. If you enlist and still the old farm be worked to maximum efficiency, then go and God be with you.—The Farming Business.

GUERNSEY CATTLE

The Guernsey is outstandingly a dairy breed. While some animals carry considerable flesh and fatten at a sufficiently good rate, they, in common with other dairy breeds, do not place the gain either in the place or in the condition to be most highly valuable. Their beef-making qualities are entirely secondary. As a whole, the cows of this breed yield rather more milk than the Jerseys, but it does not test as high. A yield of 6,000 to

8,000 pounds per year is not at all unusual, while the percentage of fat ranges in the neighborhood of 4½ per cent to 5½ per cent, instead of 5 per cent to 6½ per cent as with the Jerseys. Comparing their yield with the Holsteins, they give much less milk, but it tests more.

In respect to their milking habits, as in other points, the Guernsey occupies a position between the Jersey and the Holstein, but rather more near the Jersey.

One valuable point of Guernsey milk is its exceedingly yellow color; it in this respect outdoing all other breeds. For some markets, butter made from Guernseys on full grass pasture is more highly colored than the trade desires. On the other hand, a few animals of Guernsey blood in a herd of Holsteins or Ayrshires quite naturally increase the color as well as, somewhat, the fat content of the collective

that of making silage of these feed crops. By using silos to store feed, there never need be shortage. The time to plan such reserves in when the feed crops are being planted. Be sure and plant enough so that even if the season is an unfavorable one there will be sufficient to carry the stock through, and, having made the planting plans, try and arrange to store the feed grown in silos. In western Kansas pit silos can be made at a very low cash outlay.—Kansas Farmer.

A QUARTER CENTURY AGO

Items from The Industrialist of April 23, 1892

Corn planting will probably begin Monday on the college farm.

The college brass band drilled on the campus yesterday afternoon.

The hum of the lawn mower was heard this morning for the first time this season.

The Trinity of Life

W. H. Clemmons in the Nebraska Teacher

THERE are three injunctions which I feel that every young person should heed.

First: Find yourself. Find who you really are and what you like best. Know your weak points and your strong ones. Only by knowledge of our weaknesses and constant effort can we overcome our failings. Find what you really want to be. Determine what you are naturally best adapted to do. Don't be misled by false glitter or another's success in a different occupation. Find your groove, your talent, and stick to it. Find yourself!

Secondly, save yourself. Be careful of your physical being. Your health is a fortune and should be guarded more closely than your dearest possession. Learn economy of steps, of motion, of time. Be physically fit for any reasonable demand on your strength. Then go about your daily work with vigor, with enthusiasm, with pleasure. Save yourself.

Lastly, give yourself. Give the world the best that is in you even if it be a sacrifice on your part. Don't expect to give a second-class article and receive pure gold. One's mind grows by sharing as well as does one's character.

The familiar quotation, "Give the world the best, and the best will come back to you," is gospel truth. Give your best and experience your own pleasure in the doing. Give yourself.

Three cardinal commands for every young person: Find yourself; Save yourself; Give yourself.

milk product, and enhance its selling qualities. The length of the lactation period of this breed varies with the intensity of dairy temperament, and with the cow's food and handling, as with other breeds.—R. M. Washburn in the Northwest Dairyman.

FEED FOR LIVE STOCK

The live stock farmer finds it necessary to plan farther ahead than the man having but little stock. An abundant supply of feed is essential to success with live stock. Nothing is more detrimental to the profitable handling of stock than to have the feed supply run short. Since the seasons are variable, enough feed crops must be planted to provide an ample margin of safety. It is better to have a lot of feed left over than to be compelled to put stock on short rations before the winter season is over.

In the western part of the state it is necessary to plan for a reserve supply of feed. The farmer who always has plenty of feed in reserve will never be under the necessity of rushing stock to market at sacrifice prices when an unfavorable season cuts the feed supply short. We have known of many instances where men with such reserves of feed have been able to buy up stock cattle at bargain prices in short years and thus realize good profits on the feed they have saved.

The sorghums, properly handled, will make some feed every year and there are years in which they produce unusual yields. In such years much feed goes to waste because there is not enough stock on the farm to consume it. If properly stored and fed to cattle later, the unusual crop could be turned into profit.

No method of storage is equal to

The total receipts to date from all resources for the educational exhibit fund is \$744.

President Fairchild was called to Topeka on Tuesday afternoon on college business.

S. S. Cobb, '89, is to be married to Miss Carrie Hunter, second-year in 1887-'88, on May 4 at the Presbyterian church.

C. A. Campbell and D. C. McDowell, '91, have been received by the presbytery at Junction City as candidates for the ministry.

The young horticulturists are beautifying the grounds by the addition of evergreens and shrubs to the already handsome clumps.

Miss Bertha H. Bacheller, '88, writes from Sterling for the addresses of the class of '88, that she may start the annual class letter.

The peach trees were uncovered and raised this week—just in time for the buds to be slightly damaged by the light hail storm of Tuesday afternoon.

Professor Olin has been confined to his room this week by illness, the longest, and almost the only occasion of the kind since his connection with the college. His classes have been cared for by Professors White and Rain. He will be ready for duty on Monday, he thinks.

F. A. Waugh, '91, for nine months past agricultural editor of the Kansas Capital, has accepted a like position on the Farming and Mining Journal of Helena, Mont., with a substantial increase of salary. While THE INDUSTRIALIST regrets the loss to Kansas of this fluent writer on agricultural and allied topics, it rejoices in the recognition of his worth, and wishes him success in his new field of labor.

AFTERWARDS

Charles Hanson Towne in the New York Tribune

The sick man said: "I pray I shall not die

Before this tumult which now rocks the earth

Shall cease. I dread far journeyings to God

Ere I have heard the final shots of war,

And learned the outcome of this holocaust."

Yet one night, while the guns still roared and flashed,

His spirit left his body; left the earth Which he had loved in sad, disastrous days,

And sped to heaven amid the glittering stars

And the white splendor of the quiet moon.

One instant—and a hundred years rushed by!

And he, a new immortal, found his way

Among the great celestial hills of God.

Then suddenly one memory of earth

Flashed like a meteor's flame across his mind.

One instant—and another hundred years!

And even the dream of that poor little place

Which he had known was lost in greater spheres

Through which he whirled; and old remembrances

Were but as flecks of dust blown down the night;

And nothing mattered, save that suns and moons

Swung in the ether for unnumbered worlds

High, high above the pebble of the earth.

SUNFLOWERS

What America needs is less puppy patriotism and more potatoes.

After all, the goodly apple rotten at the core was not a bad advertiser.

Fashion hint: Take that image of the flag off your collar and wear it on your heart.

The average young man in the fashion ad looks almost as sweet as Francis X. Bushman.

Now that the price of food has become prohibitive, we shall have to live on rice and vegetable soup.

The Kansas State Collegian announces that poetry will be given space if it is commendable. But is it?

We firmly believe that all the old bachelors ought to be sent to war so that they will understand something of what they have missed.

One of the cutest things we have seen lately is the long, lingering nose that tries to push itself out through the meshes of a tightly drawn half-mast veil.

Don't get panicky. Remember that even if we send 5,000,000 soldiers to Europe, we shall have 95,000,000 people left in the United States. And they will have approximately the same needs as ordinary humans have.

A GIVER OF TREES

G. J. Boehland of Rockford, Ill., since 1914 has celebrated every arbor day by giving a tree to every child and to every school in his county. These are planted in the home grounds, along the roadsides, or in the school yard. He has given maple, elm and apple trees. Last year every child in the county got a mulberry tree from 6 to 10 feet in height. These were designed to feed the birds at some future date, for Mr. Boehland believes in birds as well as in trees. In many farm yards there are now from two to 11 trees which have been given to the children. These are not only a memorial to the public spirited man who gave them, but they may serve to tie some boys and girls to the farms that need them.—Orange Judd Farmer.

AMONG THE ALUMNI

Jay Stratton, '16, visited friends in Manhattan this week.

J. L. Lush, '16, writes that school work at Pratt is "coming fine."

Robert Terrell, '16, tested the dairy herd of T. F. Doran near Topeka last week.

Miss Mamie Hassebrook, '04, is now in Chicago, studying cafeteria management.

R. W. Hull, '08, and Mrs. Ethel (Berry) Hull, '07, are on a fruit farm near Orange, Cal.

H. E. Moore, '91, visited the college recently on his way by auto from Kansas City to Seattle.

Mrs. Katherena (Winter) Hawks, '01, who is visiting her parents in Manhattan, was a campus visitor Tuesday.

W. T. McCall, '08, has resigned his position as county agent at Caldwell, Ida., and accepted a state agricultural position.

R. S. Hawkins, '14, and Mrs. Georgia (Roberts) Hawkins, '14, were visiting the former's brother, F. H. Hawkins, Sunday.

R. E. Blair, '10, and Mrs. Winifred (Cowan) Blair, '11, of Bard, Cal., were dinner guests at the Aztex house Saturday evening.

Miss Clara Goodrich, '03, is completing her third year as head of the domestic science and art department in the high school at Stockton.

Harold McClelland, '16, is applying for a commission in the regular army. Mr. McClelland was one of the honor students of his class in scholarship.

Miss Mary Dow, '11, is studying English and related subjects in the University of Chicago. She expects to take a degree at the end of the present quarter.

DEATHS

MARY DIAL

Miss Mary Dial died at her home in Manhattan April 22, at the age of 52 years. Mrs. Lillie (Dial) Falin, '95, a sister, and Fred V. Dial, '97, a brother, are among the surviving relatives.

FUNERALS

The funeral of John Hamilton Gill, '13, was held in the First Methodist church, Manhattan, Friday morning, the Rev. J. M. McClelland, pastor of the church, officiating. Burial was in Sunset cemetery. Members of the Hamilton Literary society, of which Mr. Gill had been a member, acted as pall bearers.

MARRIAGES

DEGAN-WALSH

Miss Mary Theresa Degan, a former student, and Mr. George I. Walsh, '15, were married Tuesday, April 17, in St. Benedict's church, Atchison. They will make their home in Wichita, where Mr. Walsh is in the life insurance business.

IN SOUTHERN LUZON

Carl E. Rice, '97, writes from the Philippines to his sister, Miss Ada Rice, '95, as follows:

"I just got back from my vacation. I went to visit my former partner who now has a hemp hacienda in the southern part of Luzon. He sure has a good thing; lives in a fine house in a small town at the foot of a big volcano from which the steam is always rising. His land is just in the edge of the town on the first foothills—250 acres in hemp. A dozen servants take care of his house and about 100 laborers strip his hemp. Hemp is planted on slightly hilly ground. The leaves are pulled through a knife, like a corn knife tied to a stick. The harvest is all the year round. By the time he gets over the place once, it is time to start in again. He gives the laborers half the hemp they strip, and then his weekly

income is between \$200 and \$300 in gold.

"I stayed longer than I intended because the road was too muddy for automobiles, and I finally came down to the coast in a canoe. A fine trip!"

GREET PROFESSOR WAUGH

Twenty-five alumni of the Kansas State Agricultural college in Washington, D. C., welcomed Prof. F. A. Waugh, '91, to that city April 18 at a luncheon given for him in the New Ebbitt Hotel. Mr. Waugh, who is professor of horticulture and landscape gardening in the Massachusetts Agricultural college, had come to Washington to enter upon the duties of a commission as adviser in the forest service with which he recently was honored. He was introduced to the alumni by Prof. S. C. Mason, '90, a former instructor in the Kansas college, now with the United States department of agriculture.

Mr. Waugh's talk to the alumni was no less delightful in thought and charm of expression than are his writings, for which editors and publishers vie. He told of the gigantic project in landscape gardening which is contemplated by the forest service on some 150,000,000 acres of its lands, and to which he is to give his attention during the next few months. He appealed to the alumni, most of whom were workers in various economic phases of scientific agriculture, not to leave beauty of landscape and garden out of calculations for farming improvement.

"There is a spiritual uplift in farm life that comes from an appreciation of the beautiful in the fields and hills and woodlands," Mr. Waugh said. "Preserve these sources of inspiration and make them more beautiful. I am just now thinking of the Kansas farmer. I would have him, as he rides through his farm in his motor car, look up occasionally at the hills and the sky and learn to love the landscape as the Indians used to love it. I would have him see in the fields not only yields of alfalfa and corn and wheat, even with hogs at \$16.50 a hundred, but yields also of thought and visions of things that are higher and more lasting."

Mr. Waugh left Washington a few hours later on an extended trip to view the forest lands involved in the project and to gather the information upon which he will base his recommendations to the forest service.

SATURDAY TO BE SORGHUM DAY AT BRANCH STATION

Western Kansas Farmers Will Meet at Hays to Discuss Planting of Spring Crops

The Fort Hays Branch Experiment station will hold a sorghum day next Saturday. Western Kansas farmers will meet to determine what crops to plant this spring in view of the fact that a large acreage of wheat is dead as a result of lack of moisture or winterkilling.

Speakers will include Charles R. Weeks, superintendent of the station; R. E. Getty, specialist in forage crops, United States department of agriculture; and L. E. Call, professor of agronomy in the Kansas State Agricultural college.

The planting of a large acreage of spring grains will be encouraged. Sowing of seed will be advocated that will furnish a cash crop and will provide seed and grain that will relieve the present shortage of food products, and at the same time will leave the ground in good condition for wheat next fall.

PARKS STARTS SPRING WORK IN DEMONSTRATION ORCHARDS

Will Apply Cluster Bud Spray for Apple Scab and Cankerworm

T. H. Parks, specialist in entomology, division of college extension, has left on the first orchard demonstration circuit of the season. The purpose of this trip is to apply the cluster bud spray for the apple scab and the cankerworm in the demonstration orchards in Miami, Shawnee, Wyandotte, and Leavenworth counties, and at Seneca and Marysville.

DUCKS NEED LITTLE CARE

DRY ROOSTING PLACE AND GOOD FEED ARE ENOUGH

Use of Incubator in Hatching Them Is Inadvisable—Young Fowl Should Not Swim Until Feathered—Over-feeding Causes Death

Young ducklings need little attention if given a dry roosting place and the right kind of feed, according to N. L. Harris, superintendent of the Kansas State Agricultural college poultry farm.

"The less the ducklings are handled, the better," said Mr. Harris. "Their chief requirements are plenty of green grass, sand, and fresh water."

"As a rule it is not advisable to set duck eggs in an incubator. They require more moisture and ventilation than hen eggs."

"The recent rage over the Indian runner duck has caused the neglect of the meat producing type."

A LITTLE WATER NECESSARY

Ducklings should not swim until they are feathered, believes Mr. Harris. They must have sufficient water, however, to immerse their heads up to their eyes. In this manner they can wash out their nostrils, which easily become clogged.

Ducklings should not be overfed. Always keep them hungry. If given all they can eat, they will die of acute indigestion. Ducklings need animal feed more than chickens. Commercial beef scrap is easily obtained and will keep indefinitely.

A RATION FOR DUCKLINGS

A good ration consists of 50 per cent corn meal, 30 per cent wheat bran, 10 per cent beef scrap and 10 per cent green feed. This should be moistened with milk or water. Slopy feeds are injurious. Ducks and geese have no crops and therefore cannot digest whole grain. The grain must be moistened or ground. Many feeders mix sand up with the feed up to 10 per cent.

"Ducklings are subject to rheumatism," said Mr. Harris, "and it is necessary to keep them dry and give them dry roosting quarters. They must have secure quarters, to avoid danger from rats. They must have abundant ventilation, however, because they smother easily."

SHOULD BE SOLD WHEN YOUNG

"Lice and mites do not affect ducklings, but chiggers bother them by getting under their wings. The application of salty grease is a good remedy."

"Ducks must be sold at 10 to 12 weeks of age when weighing from 4 to 6 pounds, if a profit is desired. A grown duck is a heavy eater, but does not eat much grass."

ORCHARDIST NOW WATCHES FOR YOUNG CANKERWORMS

Pest Must Be Destroyed Promptly if Best Results Are to be Obtained

The careful orchardist is watching closely for cankerworms in the cluster buds. The young cankerworm is small and its presence is often first noticed by reason of the brown appearance of the buds upon which it feeds.

Quick action is necessary, warns the department of horticulture in the Kansas State Agricultural college, as the cankerworm must be killed before the blossom opens or the orchardist must choose between the two evils of spraying while the trees are in blossom and injuring pollination and of allowing the cankerworms to become so large that they are more difficult to control and will consume a considerable amount of foliage.

When they are numerous, quick action should be taken and the cluster bud should be thoroughly sprayed. It is well to have the poison a little stronger than is usually recommended for the blossom fall spray. Three pounds of arsenate of lead to 50 gallons of water has proved satisfactory in experiment station demonstrations. The reward for quick work in controlling the cankerworm is double, for

trees that are defoliated this year will have a small chance of having sufficient energy to set fruit buds for the 1918 crop, and it is almost certain that where the cankerworms are numerous this year they will be more difficult to control next year.

Every owner of an apple tree should spend sufficient time to determine whether or not he has cankerworms in the trees and if he has them to proceed at once to the work of control.

Efficient work may be done with a small sprayer or with a barrel pump or with either hand or gasoline power orchard pump.

KANSAS ENGINEERS TO MEET HERE NEXT WEEK

Forty Exhibitors Will Display Specialties—Program of Special Interest to Power Plant Men

The Kansas branch of the National Association of Stationary Engineers will hold its annual convention at the Kansas State Agricultural college May 1 to 4.

Forty exhibitors are expected to be present at the convention. They will display engineering specialties to the members of the association. A program of special interest to power plant engineers and to owners of steam power plants has been arranged.

The association will spend Tuesday visiting points of interest about the college and the city of Manhattan. In the evening moving pictures of interest to engineers will be shown in the college auditorium. Wednesday will be devoted to the business of the association. The engineering students of the college will parade Wednesday evening in honor of the delegates and guests.

Joseph Harrington of Chicago, consulting power plant engineer, will speak Thursday on "Economic Combustion of Fuels." Mr. Harrington is considered one of the greatest American authorities on combustion and power plant operation.

The annual banquet of the association will be held Thursday evening. Addresses will be made by prominent power users and power plant engineers. F. W. Raven of Chicago, national secretary of the association, will be toastmaster.

LET NATION USE YOU WHERE YOU'RE NEEDED

President Waters Gives Advice to Students of College—Function of Education in Rebuilding World

Offer your services to the nation in the way in which it can best use you, was the advice given by Dr. H. J. Waters, president of the Kansas State Agricultural college, to the students.

President Waters urged the young men and women to keep cool in the emergency, and to bend their energies to performing whatever tasks were laid upon them.

He discussed also the part that the schools and colleges would take in the rebuilding of the world at the close of the war.

"Any young man or woman who does not go to school, provided he is not needed in other work, will lose a great part of the opportunity for service that might come to him at the end of the war," said Doctor Waters. "The colleges will go on, as usual—they are going on in Germany, France, and Great Britain. There is no influence that will be more needed at the end of this struggle than the influence of education."

"Keep on going to school if you are not needed elsewhere. Urge your friends to do the same."

"The young women of the country will be called on for greater and greater service. The enrolment of young women in the colleges of the country should be doubled in preparation for this service."

S. C. Salmon, associate professor of farm crops in the Kansas State Agricultural college, went to Maple Hill Saturday to lecture before the farmers' institute at that place.

TO CUT FOOD WASTES

DOMESTIC SCIENCE DEPARTMENT URGES GREATER ECONOMY

Food Must Be Conserved and Diet Regulated Also, Say Specialists—Do Not Buy an Oversupply of Foodstuffs

That the food situation must be dealt with largely through the conservation of food, regulation of diet, and the elimination of waste, is the belief of the instructors in the domestic science department of the Kansas State Agricultural college. Food waste in Kansas may be conservatively estimated at \$14,000,000, it is pointed out.

Waste in the household is due largely to bad preparation of food materials, bad cooking, improper care and handling, buying and serving an overabundant supply, failure to save and utilize the portions of the food not consumed, and too elaborate entertaining of guests.

ADVICE FOR BUYING MEAT

Buy meat for stew often, advise the domestic science specialists. There is no waste and it may be appetizingly prepared in stews, hash, croquettes, creamed meat, meat pie, goulash, and scalloped meat and rice.

Meat ground into Hamburg steak costs half as much as good steak, is equally nutritious, and has less waste.

All meats put up in tins are expensive. Bulk dried beef and bacon cost much less.

Use no pork except loins, ribs, and trimmings, which cannot be cured.

Use young beef liver and heart frequently. They are inexpensive and palatable when well cooked.

MILK IS INEXPENSIVE

Eggs at less than 30 cents per dozen are more economical than meat, but not so economical as milk. Milk satisfies all food requirements of the child and is of high food value to the adult. Its cost in comparison with its great food value justifies a much more extensive use of it.

Cereals, green vegetables, fruit, and nuts may be used much more extensively to advantage.

Ready prepared breakfast foods are too expensive, considering their food value. Breakfast foods should be bought in bulk and prepared at home.

Ices and candies are usually eaten in addition to the regular diet and are unnecessary.

ELIMINATE FANCY ARTICLES

Fancy cheeses, fruits, and vegetables out of season should be eliminated entirely.

Housewives should be careful not to buy an oversupply of cereals and flour in the spring, as these goods will not keep through the summer.

Canned goods may be bought at a 10 to 20 per cent discount by the case. A case usually contains two dozen cans, and may be assorted, half of one kind and half of another being bought.

Buy two grades of canned vegetables. Use the cheaper grade for soups and made dishes and the more expensive grades to serve as vegetables.

SHOULD SELL SMALL QUANTITIES

The French meat dealer will sell any or all parts of the chicken. He offers small roasts or a small loin cut of lamb. American dealers would do well to follow his example in selling small quantities for small families. Markets should be encouraged also to offer small bunches of mixed vegetables. Central municipal markets, when practicable, are a great aid in helping the farmer sell his green products in the city.

The management of the household finances is the most vital problem in running a home. When the price of a food goes up, it indicates that the supply of that food is low. Consumers should use the smallest possible amount of that food, and producers should increase its production.

Foodstuffs should be bought in reasonable amounts. One cause of the present high price of food is the large purchasing, particularly of food that is not being produced at the present time.

TAKE APPLES IN AUTOS

MARKET COMES TO KANSAS FRUIT GROWERS NOWADAYS

Secret of Success Is Systematic Spraying to Combat Insects and Disease, Points Out Extension Specialist in Entomology

Few Kansas apples will be taken to market in the future, in the opinion of T. H. Parks, specialist in entomology, division of extension, Kansas State Agricultural college.

"The market is already coming after the apples and taking them away in automobiles," said Mr. Parks. "The purchasers are business men of the towns, farmers whose orchards have passed away, and persons who believe that they should raise a few more bushels of grain and buy their fruit."

SOLD 6,000 BUSHELS OF FRUIT

H. N. Dyer of Abilene, sold 6,000 bushels of apples to this kind of a market and turned away many persons who came after the supply was exhausted. Mr. Dyer believes in pruning and spraying, and has by properly caring for his trees saved his orchard of 60 acres, while many other orchards in the neighborhood have died from disease. The few that are left are not profitable because preyed upon by insects. Mr. Dyer's market starts with the maturing of summer varieties but reaches its height at wintertime.

AUTOS CAME 50 MILES

Paul Lytle of Valencia sold nearly his entire crop of 5,000 bushels in his orchard. Automobiles came for 50 miles to get these apples and were still coming in March for the last of them that were kept in common storage.

Mr. Lytle prunes and sprays regularly to combat insects and disease. Last year he erected a mixing tower for making Bordeaux mixture. Both Mr. Dyer and Mr. Lytle spray four times each season, each time for a definite purpose.

MEMBERS OF PROFESSOR'S FAMILY FORM ORCHESTRA

Organization Gives Concerts in Lyceum Course in Kansas Communities

The Burton Juvenile orchestra gave a concert in a country community near Miltonvale Friday evening under the auspices of the rural service department, division of extension, Kansas State Agricultural college.

M. G. Burton, director of home study service, is also director of the Burton Juvenile orchestra, and the other members of this orchestra, with one exception, are members of his family.

Mrs. Burton plays the piano; Erme, 14 years old and the oldest of the children, the violin; and Rowena, 9 years old, the cello. Basil, aged 12 years, plays the cornet. Victor, 7 years old, plays the drums. He is said to be the youngest trap drummer in the state. Joe Haines, aged 12 years, plays the clarinet.

The rural service department of the college has given lecture courses in several communities this year and this concert was given as one of these numbers. Its object is to show the people what can be accomplished in music in the home.

TRIMMING FEET OF HORSES IS IMPORTANT TO PROFIT

Hoofs Should Be Given Careful Attention from Colthood Up

Trimming feet of horses is one of the important factors in profitable horse production, according to Dr. C. W. McCampbell, associate professor of animal husbandry in the Kansas State Agricultural college.

The colt's hoofs must be given constant attention from the time the colt is foaled until it reaches maturity. Even then they need considerable attention. Often during colthood the feet are left to care for themselves. This neglect results in later life in many of the unsoundnesses common to horses' feet and legs.

Unsoundnesses that may be caused by lack of care when the horse is young are sidebones, ringbones, splints, bone spavins, bog spavins, corns,

and cracked hoofs. All the unsoundnesses tend to lower the value of the horse. The time to prevent any of them is when the colt is young and his bones and tendons are yet plastic.

Nature intended that the concussion and weight sustained by a horse's legs should fall through a straight line. If the feet grow long and ill shaped or break off and throw the line of concussion or weight away from a perpendicular line then one or several parts of the leg are under undue strain. The result is an inflammation and unsoundness of the part affected by the unnecessary strain. The way to avoid this is to keep the hoof level and true at all times.

OLD OIL IS A SERIOUS MENACE TO GAS ENGINE

New Product Is Expensive but Costs Less Than Replacing Bearings, Points Out W. H. Sanders

Old oil will damage the gas engine far more than will hard work, according to W. H. Sanders, instructor in farm motors in the Kansas State Agricultural college. Oil that has become surcharged with the fine steel particles from the bearings should be drained off and fresh oil should be placed in the oiling system at regular intervals.

"Oil becomes black and gritty in time and before this stage is reached it should be replaced by fresh oil," said Mr. Sanders. "The dirty oil may be filtered and used again, but the best method is to use fresh oil. New oil costs something but is cheaper than new bearings."

In cleaning an engine before replacing the supply of oil, it should be run until thoroughly warm, advises Mr. Sanders. All the old oil should then be drained from the crank case. The same amount of clean kerosene should be placed in the oil reservoir and the engine run carefully for a short time until all of the crankshaft bearings are thoroughly cleaned. This should be regulated by the judgment of the operator.

The danger in this operation is in running the engine too long while the kerosene is acting as lubricating oil. Kerosene has little lubricating quality and the bearings will burn out in a short time.

When the engine is stopped it should stand for two or three minutes before the kerosene is drained off in order to allow all the dirty kerosene to drain from the bearings and walls of the cylinders. The kerosene is drained from the crank case in the same manner as the old oil, and the fresh oil should be placed in the crank case.

"In starting the engine after the new oil has been placed in the lubricating system," said Mr. Sanders, "care should be used. The engine should not be placed under a full load until the fresh oil has had time to circulate thoroughly into the bearings."

DIPPING VAT IS ESSENTIAL IN RUNNING SHEEP BUSINESS

Flock Should Be Treated at Least Once a Year, Oftener if Necessary

A dipping vat is necessary in the sheep business, in the opinion of A. M. Paterson, instructor in animal husbandry in the Kansas State Agricultural college.

The flock should be dipped at least once a year and in case of ticks and scab as often as necessary, pointed out Mr. Paterson. This dipping should be done in warm weather. Sheep should always be dipped after shearing. Where ticks are present they will leave the old sheep and go to the lambs. A lamb that is covered with ticks should be dipped.

It is advisable to examine the flock in the fall and if ticks are present the sheep should be dipped again. Dipping not only kills parasites, but tends to improve the general health of the animal, giving a more luxuriant growth of wool.

In dipping the sheep use a large tank so that it is possible to immerse each animal completely in the liquid. Any of the coal tar dips are good. The sulphur dip has also proved satisfactory.

WIRE WILL SAVE STOCK

PROPERLY GROUNDED FENCE A PROTECTION AGAINST LIGHTNING

Storm Causes Cattle and Horses to Congregate in Dangerous Places—Electrical Engineer Explains Valuable Precautionary Measures

When lightning strikes a wire fence, horses and cattle standing near it are likely to be killed, unless the fence is properly grounded, points out C. E. Reid, professor of electrical engineering in the Kansas State Agricultural college.

"The electric current will follow the wire until it shoots off to some nearby object," said Professor Reid. "A storm will always drive the cattle and horses along until they come to a fence, where they will congregate, thus exposing themselves to any electric bolt that may strike the wire."

WIRES AT 20 ROD INTERVALS

"If the fence is properly grounded, however, it will carry the electric current directly into the ground. Ground wires should be placed at intervals of 20 rods. Use a number 8 or a number 10 galvanized iron wire. A rod or a small cable is better, but is more expensive and hardly can be recommended—especially for an old fence. Twist the wire two or three turns around each fence wire, and by means of a crowbar, set it in the ground to a depth of four or five feet."

"In a dry section it is better to sink the wire deeper until it comes into contact with moisture, since dry earth makes a poor conductor of electricity. Allow the wires to project a few inches above the fence. These projecting points will conduct into the air any electricity accumulating in the ground, and thus will prevent the lightning from striking anywhere in the vicinity."

MORE WIRES IN BARNYARD

"If the fence is just being put up the ground wires may be fastened to the bottom of the posts. Around the barnyard and feed lots where cattle congregate, ground wires should be placed at intervals of 10 rods or less—the closer the better. Where a fence adjoins a building, place a ground wire at the first post. A woven or mesh wire fence need not be grounded if the bottom wire is in contact with the earth."

"A more permanent but more expensive earth connection is made with a post of galvanized iron, with clamps for holding the wire, which are made expressly for the purpose. These posts should be placed from 50 to 100 yards apart, according to the dampness of the soil."

COLLEGE IS TO HAVE ITS PICTURE TAKEN FROM TOWER

Panoramic View Will Show Off Buildings to Advantage

The Kansas State Agricultural college is to have its picture taken. A 60 foot tower from which the camera man will take the photograph has been built east of Anderson hall.

A panoramic view will be taken of all the buildings and the campus. Moving pictures will be made showing students on their way to morning classes and going to and from chapel. The cadet corps will be snapped in action, the sheep grazing on the campus will be shown, and possibly the girls of the division of home economics will be taken while on parade. One view will show the cadets in "K. S. A. C." formation.

WHAT TO CONSIDER WHEN PURCHASING AN ICE CHEST

Model, Fitting of Doors, and Lining Are Important, Says Professor Floyd

Points to be taken into consideration in purchasing an ice chest are the model, fitting of the doors, and the kind of lining, according to E. V. Floyd, assistant professor of physics in the Kansas State Agricultural college.

"The best model has three apartments, the ice being placed in one of the upper corners," said Professor Floyd. "One door to the ice apartment should open into the room, and another upon the porch."

"A refrigerator should have close fitting doors. Experiments have shown that expensive refrigerators with snugly fitting doors are not so efficient as cheaper refrigerators with tight fitting doors. The double walls should be waterproof, and preferably air tight. The insulating material should not be of organic matter, such as hair felt, because such material deteriorates with use. Asbestos and mineral wool make excellent insulators and do not support bacterial growths."

"The lining in a refrigerator should have round corners, as these make it easier to clean. The ideal refrigerator has porcelain linings, which may be taken out for cleaning."

HORSE IMPORTANT FACTOR IN GREAT FOOD CAMPAIGN

Increase in Crop Acreage Will Cause Heavy Demand on Reserve Energy of Farm Animals

That the horse is a highly important factor in the great food production campaign now on, is the contention of Dr. C. W. McCampbell, associate professor of animal husbandry in the Kansas State Agricultural college.

"Under normal conditions," said Doctor McCampbell, "Kansas cultivates annually 20,000,000 acres of land. There are 700,000 horses and mules in Kansas of suitable age and condition for farm work. With a normal acreage one horse would be required to do the work of cultivating approximately 30 acres, which is ordinarily considered a good season's work for a horse."

"Any increase in the crop acreage this year will result in an increased demand upon the reserve energy and power of the farm horses, and emphasizes the imperative need of observing every possible means that may add to the comfort and efficiency of these animals."

The farm horse—mule included—will be the main dependence in this time of need. No greater disaster could befall the state than a serious outbreak of fatal horse disease.

"In view of the tremendous importance of the horse as a factor in maximum crop production," said Doctor McCampbell, "it is the duty of every horse owner to observe most carefully the many little details in sanitation, feeding, watering, and working that add to the efficiency and economy of farm horse labor."

AGGIE CO-EDS TO INDULGE IN CHIEF AMERICAN PASTIME

Baseball Will Be Included in Athletic Activities

Kansas State Agricultural college girls will play baseball this spring. It is planned by the instructors in physical training to have interclass games if enough girls can be induced to compete.

Much interest is being shown in tennis and swimming. Approximately 200 girls have enrolled for swimming lessons. The esthetic dancing classes have an attendance of 100. Preparations are being made for the dances to be given at the May fete, May 19.

DISK CORN AND KAFIR LAND BEFORE SEED IS PLANTED

Growth of Young Moisture Using Weeds Is Thus Checked

Corn and kafir ground should be disked in advance of planting in any section where there is sufficient moisture to start the weeds, in the opinion of L. E. Call, professor of agronomy in the Kansas State Agricultural college.

Disking will kill the young weeds that are using moisture which may be urgently needed by the crop. It will destroy the crop of weeds that starts at the edge of the lister furrow after planting and thus save time in cultivating and also put the ground in better condition to absorb moisture in case a heavy rain falls. Spring disk-ing in advance of listing has increased the yield of kafir 15 per cent at the Hays Experiment station in the last three years.

CALLS ALUMNI TO SERVE

BOARD OF ADMINISTRATION APPEALS TO COLLEGE GRADUATES

Letters Go to 20,000 Graduates of Kansas Institutions—Point Out Ways of Helping Nation in Present Emergency

Appealing to every graduate of every state institution in Kansas to serve the nation in the present crisis, the board of administration has sent out letters to the alumni—nearly 20,000 there are—of all the schools under its supervision.

Similar letters are being sent out by single institutions in various states, but the Kansas letters are believed to be the first sent by a board having a number of colleges in its charge.

WHY STATE PROVIDES EDUCATION

The letters read as follows:

"Kansas educational institutions have graduated 18,787 men and women, of whom you are one. These are located in every county in the state. It is probably true that you attended school for a selfish purpose. You expected to derive personal gain from your college work. No doubt, you have succeeded in some measure."

"The state provides means for education in order that the state may benefit by raising the standard of citizenship and by the benefit you may be to the community in which you cast your lot."

KANSAS MUST FURNISH FOOD

"America is facing a great crisis. Kansas has a duty to perform. We are an agricultural community. We must feed and clothe ourselves. In addition to this we must furnish food and clothing for the thousands who are not so fortunately located. Kansas has helped you in providing opportunities looking toward your education. The present furnishes you an opportunity to repay the state for its investment in you."

"There are three ways in which you may satisfy this obligation. The first and seemingly the most heroic, is enlisting for actual service in the army or navy. Second and equally patriotic and important, is the consecration to service in your home community wherein you will encourage those more fit to enlist in actual army or navy service. Third, no less patriotic than the other, and even more important in serving your country, is to offer your service in economic problems of food production, elimination of waste, and the conservation of the necessities of life."

ORGANIZERS ARE NEEDED

"There is a necessity in your community of some one beginning at once the organization of garden clubs, potato clubs, tomato clubs, canning clubs, pig raising clubs, and in giving your talents to aid farmers, truck gardeners and stock raisers in solving the problems incident to the approaching crop and harvest season, and in bringing about the greatest possible elimination of waste of food."

"May Kansas count on you?"

BURR TALKS TO FARM BUREAU AND TO HIGH SCHOOL CLASS

Rural Service Director Makes Addresses at Mankato and Ionia

Walter Burr, director of rural service in the division of extension, Kansas State Agricultural college, went to Mankato Friday to give a talk at the annual meeting of the Jewell county farm bureau. In the evening he gave an address at the high school commencement exercises held at Ionia.

DAIRY HUSBANDRY STUDENTS ARE AWARDED SCHOLARSHIPS

University of Missouri Honors Agricultural College Seniors

James R. Dawson of Hays and Robert J. Osborne of Wichita, seniors in dairy husbandry in the Kansas State Agricultural college, have been awarded \$200 research scholarships in dairy husbandry by the University of Missouri. Their work will consist of lectures and research work.

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WEED FIGHT IS URGED

STATE WIDE SWATTING CAMPAIGN AS FACTOR IN FOOD DRIVE

Proper Cultivation, Crop Rotation, and Selection of Clean Seed Are Means of Eradicating Weeds—Varieties Common in Kansas Fields

A state wide weed swatting campaign is advocated for Kansas farmers and gardeners in order to insure a war crop for this year.

"Pernicious weeds, commonly introduced on the farm by the sowing of impure seed, tend toward crop reduction," asserted Robert Schmidt, seed analyst in the Kansas State Agricultural college. "Often a good stand of alfalfa has been ruined by vigorous weeds which choked it out before it became well established."

WEEDS A ROBBER CROP

Weeds are primarily a robber crop, according to Mr. Schmidt. When growing with crop plants, they rob the soil of much food and moisture which should be used by other plants. Weeds are usually hardy and prolific. They will thrive especially well in carefully prepared soil if given a chance. Unless kept down by proper cultivation and crop rotation they will soon overrun the land. Weeds are eradicated at great expense. Good clean seed should always be sown—the best obtainable is none too good.

A large number of weeds are common in Kansas. Practically all of them are familiar to the farmer and gardener. Some of the most troublesome are bindweed, dodder, curled dock, buckhorn, foxtail, Russian thistle, crab grass, chicory, and pigweed.

BINDWEED HARD TO COMBAT

The bindweed, a deep rooting perennial plant, is the most difficult to eradicate. Its roots send up shoots from a depth of two feet. When left to itself it spreads rapidly in a field—as much as 10 feet in a season. It will thus be seen that unless radical and prompt measures be adopted for its eradication, it is only a question of time before it will take an entire field. As a matter of fact, crops cannot be raised at all where the land is infested with a heavy stand of bindweed.

There are two effective and practical ways of combating this weed. By putting 25 hogs to the acre on land covered with bindweed, it has been found that they will practically eradicate the weed in two seasons. The hogs, of course, will have to be confined to the bindweed area and be fed lightly in order to compel them to eat off the tops, and root down after the underground parts of which they are fond. It is reported that hogs will do remarkably well on one-fourth ration while feeding on bindweed. The other way of effective eradication is by intensive cultivation. This is especially practical over small areas of infested land.

KILL THISTLE WHEN SMALL

Russian thistle is another weed, common to Kansas, which spreads rapidly because of its presence in crop seeds. It is a so-called tumbleweed. Russian thistles are prevented from maturing by cultivation or harrowing. The plants are easily destroyed while small. If allowed to mature, they should be gathered up and burned before they break loose and scatter their seeds far and wide. The removal of weeds along the roadside is important because they are a factor in the spread of this pest. Careful seeding so as to occupy the land fully with the crop will check this weed to a large extent.

The foxtails might also be mentioned because they are common in crops. Green foxtail is an annual plant closely resembling the common millet. It ranges from one to three feet high, the spreading branches springing up from the crown of the plant. The

seeds begin to ripen in July. Yellow foxtail is similar to green foxtail and is almost always closely associated with it as a weed. These foxtail grasses are bad weeds only because they are so numerous that they choke out crop plants. They also produce an enormous crop of seeds.

WEEDS SHOULD BE STUDIED

The foxtails are easily eradicated by cultivation. In the case of alfalfa, cultivation with a spring-tooth harrow or spike-toothed disk harrow will help to keep them in check.

"Farmers should study weeds, learn how they grow, when they mature seed, whether they come from seeds or from roots each year, in what soil they thrive best, and other similar features," said Mr. Schmidt. "Then the question of eradication will be more easily solved."

GROW BEANS IN EVERY HOME GARDEN THIS YEAR

Beans Are Warm Weather Crop and Should Be Planted When Danger from Frost Is Past

Beans should be grown in every home garden this year, believes M. F. Ahearn, professor of horticulture in the Kansas State Agricultural college. Enough should be planted merely for family use.

Beans are a warm weather crop and may be planted any time after the ground becomes fairly warm and when there is no danger of frost after the plants are through the ground, pointed out Professor Ahearn. The growing season extends from May 10 to September 15.

There are three distinct kinds of beans—string, green shell, and field. The pods of the first type are used while young and tender. When they are older the beans are taken out and cooked alone. Any average soil is good for the cultivation of this first variety and a succession of plantings should be made. They are planted about three inches apart in rows and covered to a depth of two to three inches. Either the yellow or green pod variety may be used.

The green shell or bunch bean, as it is more commonly called, is planted in hills and a pole is placed by each hill on which the vine may climb. This variety is sometimes planted by hills of corn, thus doing away with the necessity for the poles. These beans are usually taken from the pods just before they are fully matured though they may be left in the pod until fully matured and then dried.

Red kidney and white pea, or navy bean, are the two varieties classed as field beans, or dry shell beans. These are never taken from the pods until fully matured. These are more often a field crop, the planting, harvesting, and threshing being done by machinery. There is much danger of field beans rusting if there is a large amount of rain and heat, and if the weather is dry the pods will not fill, due to imperfect pollination.

MANY GARDEN CROPS MAY BE PLANTED IN EARLY MAYTIME

Council of Defense Gives List of Vegetables for this Month

The first half of May is the time to plant many garden crops that will help reduce the national food shortage. This is the statement of horticulturists connected with the Kansas council of defense.

Sweet corn, squashes, sweet potatoes, beans, cantaloupes, peppers, cucumbers, and pumpkins may all be planted. It will be time also for a second planting of radishes, lettuce, and peas. The wrinkled varieties of peas should be used in this planting. Tomatoes may be put out when the ground is warm, usually toward the middle of May.

TO PUSH GARDEN WORK

INCREASED ACTIVITY WILL BE NECESSARY TO SUPPLY STATE NEEDS

Planting of Larger Acreage of Sweet Corn Is Recommended—Intercropping with Radishes, Lettuce, and Beans Suggested by Dean Johnson

Garden work in Kansas should be pushed to the utmost if enough vegetables are to be grown this year to supply the needs of the people, in the opinion of Edward C. Johnson, chairman of the subcommittee of the Kansas council of defense on gardening and canning, and dean of the division of extension in the Kansas State Agricultural college. The growing of sweet corn is recommended.

The total acreage devoted to all vegetables in Kansas according to the 1910 census was 48,757. The number of farms listed for that year was 111,108, making less than one-half acre of garden for each farm.

Owing to the high food value and the palatability of sweet corn the area devoted to this crop should be largely increased, believes Dean Johnson. A half acre of this crop alone for each farm where it can be successfully grown would not be too much.

YIELD THREE TO FIVE TONS

The yield of sweet corn on good soil with a high percentage of stand is about three to five tons per acre of green corn. Intensive cultivation will produce larger yields. The two varieties giving the best yields at the Kansas Agricultural Experiment station are mammoth white cory and Stowell's evergreen. The average yield per 100 foot row for these varieties was 90 pounds.

In order to most completely utilize the crop a succession of plantings of a standard variety or the planting of early and late strains should be practiced. Intercropping with radishes, lettuce, and even beans is practicable when the corn is young and space is valuable.

Fresh soft sweet corn is a vegetable of high nutritive value and great palatability. It is composed of 75 per cent water, 19 per cent carbohydrates, and 5 per cent protein. It should be utilized as soon as picked whether for table use or for drying or canning as it deteriorates rapidly when removed from the stalk.

WAYS OF USING CORN

Sweet corn may be profitably used as roasting ears for the table, canned alone or in combination with other vegetables such as beans, or it may be preserved or dried, pointed out Dean Johnson.

Sweet corn is often preserved in a small way by cooking and then cutting it from the cob and drying it in the sun, oven, or evaporator. The most satisfactory way to store, however, is in cans or jars. The process is quite simple and facilities are available in practically all homes. The crop is easily transported from the country to the town without deterioration and would lend itself readily to use in municipal canning plants.

The surplus corn not used in canning and drying may be readily preserved in brine similar to that used for cucumber pickles or dried in the sun, oven, or evaporator.

COMBAT CORN EARWORM

The corn earworm is one of the most destructive pests of the sweet corn crop in the United States. It is estimated that the crop is reduced from 10 per cent to 20 per cent by this insect. During the past 6 years in Kansas the average number of ears of corn injured by the corn earworm ranged from 85 per cent to 95 per cent of the total crop, and from 5 per cent to 25 per cent of the grains on these ears were injured either by the worm or the accompanying molds and fungi.

It has been demonstrated that arsenate of lead mixed with sulphur will control the worm when dusted on the ears. The cost of the treatment is from \$5 to \$9 per acre, and will be found profitable where corn is grown for roasting ears. Sweet corn can be sold on the market from 5 cents to 10 cents more per dozen ears when it is known to be free from earworm injury.

KANSAS FARMER WILL NOT FAIL IN CROP PRODUCTION

State Council of Defense Makes Plans for Financing Where Need of Money Exists

Kansas is not going to let the farmer fail.

Bad luck in the last year or two will not be allowed to cut down crops in this war time. Kansas is going to finance the man who is out of luck and therefore short of seed or of feed for his live stock.

The finance committee of the Kansas council of defense expresses confidence in the ability and willingness of the local bankers to look after farmers in their vicinity. The committee will act as a general clearing house, however, to bring cases of farm need to the attention of the bankers. In any case where local funds may prove inadequate the committee will provide means for extending the necessary credit.

Several cases have already been taken up, in which farmers lacked money to buy necessary machinery. In other cases men had no grain and were turning their horses out to graze at night after hard work all day, thus reducing efficiency fully 50 per cent. In all these cases the local banks were abundantly able to meet the situation as soon as they learned of the need.

The members of the committee, representing all the congressional districts of the state are: Governor Arthur Capper, chairman; L. H. Wulfekuhler of Leavenworth, president of the State Bankers' association; Emerson Carey, Hutchinson; Henry Lassen, Wichita; W. R. Stubbs, Lawrence; E. V. Lanyon, Pittsburg; Charles W. Thompson, Marion; C. G. Cochran, Hays; W. E. Wilson, Washington.

FOOD VALUE OF NUTS IS OFTEN UNDERESTIMATED

They Are Useful as Meat Substitute, Says Domestic Science Instructor

The food value of nuts is usually underestimated. Nuts are rich in both protein and fat and may be used as a meat substitute in the diet, according to Miss Alice Skinner, instructor in domestic science in the agricultural college.

"Nuts should be regarded as a staple article of food whose constituents are in a concentrated form," said Miss Skinner. "In using nuts as a meat substitute it is best to combine them and some starchy food of considerable bulk with a milk sauce. When they are used in bread or in combination with vegetables and salads they should be finely ground to make the constituents more easily digested."

"Nuts that are most available on the average market are peanuts, black walnuts, English walnuts, chestnuts, pecans, Brazil nuts, and hickory nuts. These nuts are found on the market in several different forms, principally as nut meats, nut oils, nut meals, and as blanched and whole nuts."

"Nuts should be included in the diet at least once or twice a week for adults, but should be used sparingly in the diet for children because the food is in such concentrated form. They may be used in both cooked and uncooked dishes—salads, candies, breads, cakes, custards, puddings, and baked dishes."

TALK CROPS FOR WEST

ENTHUSIASTIC FARMERS AT HAYS FOR GRAIN SORGHUM DAY

Special Problems Confronting Agriculture in Region Are Discussed—Station as Clearing House—No Time for Untried Plans

The best crops for western Kansas in this war year, formed the theme of a meeting of farmers at the Fort Hays Experiment station Saturday, observed as "grain sorghum day." Though the heaviest rain in months had fallen the night before and the weather remained extremely threatening, between 60 and 70 farmers, some from points as far as 35 miles distant, were in attendance. Had the weather been propitious, making the use of automobiles on roads more practicable, undoubtedly several hundred would have been present.

The meeting was an enthusiastic one, the men present discussing with marked interest the special problems confronting agriculture in western Kansas during the present year.

CORN AND GRAIN SORGHUMS

It was generally agreed that well adapted varieties of corn and the grain sorghums would be of the greatest service for planting this spring.

That this is no time to experiment with new crops was the message brought by Prof. L. E. Call from the Kansas State Agricultural college. Beans, he emphasized, are not a crop suitable for growing on a field scale in the state. Every farmer should grow enough string and shell beans for home use, he pointed out, but to plant beans on a much larger scale would probably prove disastrous. He quoted the result of cooperative experiments with farmers in many parts of western Kansas showing the crop to be generally unsuccessful.

AGRONOMIST DISCUSSES CROPS

Professor Call expressed himself strongly in favor of corn and grain sorghums, suggesting that if a considerable acreage were to be planted, it might be wise to divide it equally between the two crops. A farmer wishing to put in a rowed crop with rows the ordinary distance apart will find corn preferable, as it will leave the ground in better condition for seeding wheat in the fall. Corn is also somewhat easier to plant and harvest than are the sorghums.

On the other hand, the grain sorghums are the more dependable. If the ground is to be used for wheat in the fall, however, the rows planted should be twice as far apart as usual. Professor Call pointed out that there is a strong demand for the grain sorghums—kafir, milo, and feterita—on the market. The forage sorghums, such as Sudan grass, Freed's sorghum, and the amber sorghums, should be grown only if one owns live stock or has a sure and ready market.

GET WELL ADAPTED SEED

Charles R. Weeks, superintendent of the Hays station, laid stress on the importance of getting seed from the north and west rather than the south and east in order to insure maturity in the growing season. Superintendent Weeks has arranged to have the experiment station at Hays act as an emergency clearing house for seed, and at the meeting Saturday a large number of orders were taken which will be filled by farmers having seed for sale.

R. W. Getty of the Hays station gave the results of tests on silage production at the station. The general results indicated that the forage sorghums produced the largest amount of silage to the acre, the grain sorghums standing next, and corn third. In tests of three hays, red amber sorghum ranked first in quantity per acre, Sudan grass second, and Kursk millet third (Concluded on Page Four)

THE KANSAS INDUSTRIALIST

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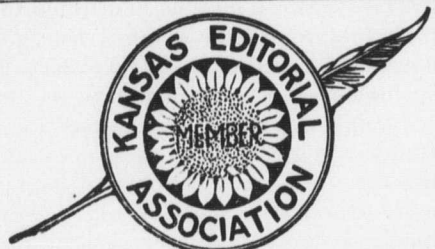
H. J. WATERS, PRESIDENT.....Editor-in-Chief
N. A. CRAWFORD.....Managing Editor
J. D. WALTERS.....Local Editor
ADA RICE, '95, M. S. '12.....Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

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WEDNESDAY, MAY 2, 1917

FOR EVERY GRADUATE

The letter of Walter J. Burtis, '87, president of the Alumni association, printed elsewhere in this paper, is worthy the careful consideration of every graduate of the college.

As Mr. Burtis so well points out, much of the strength of an educational institution comes from its loyal alumni—the men and women who know the institution intimately, who love it, and who long to see it perform more and more important service to its state and its nation. Much can be accomplished individually by the alumni in support of their alma mater, but a great deal more can be accomplished when they work collectively with certain great aims in view.

This is one of the main functions of an association of alumni. It makes possible unified work in support of the best ideals and highest purposes of the institution. Every college graduate ought to ally himself definitely with his alumni association, take an active interest in its plans, and do all in his power for its support.

HELPING WIN THE WAR

In this year of war, when Kansas has an especially important part to play in feeding the nation, the Fort Hays Experiment station is doing its bit in western Kansas, and doing it extremely well.

That on as disagreeable a day as could well be imagined, more than 60 farmers would drive to the station for a meeting, is proof of the interest and effectiveness of the station's work in the region in which it is situated. This happened last Saturday. At other recent meetings, held under more favorable weather conditions, hundreds of farmers have been present.

The station is doing precisely the things which are needed this year. It is promoting the growing of the crops which long experience has proved most profitable for western Kansas. It is emphasizing the best methods of seedbed preparation and cultivation. It is acting as an emergency clearing house for seed, in order that no farmer in the region may fail to secure a crop through inability to obtain well adapted seed. In these and many other ways the station is helping win the war.

COLT CONSERVATION

Consideration of patriotism or profit (or both) are resulting in a large increase of the acreage tilled. Throughout much of the best corn belt territory the spring has been favorable for getting crop work started on a big scale. A few weeks of unfavorable weather will strain the work stock resources of many a farm, if the work of tillage and harvest is to be kept up. That is where the colts come in—or get knocked out. The reward of high prices is probably more certain than it ever has been within the knowledge of this

generation of farmers, and the temptation to make the crop at no matter what cost in horseflesh, will be great. We will not try to figure the profit—difference between one course and the other—but believe the suggestion will be accepted when we say that quite a number of high priced crops, after 1917, will be raised before our equipment of good farm horse power can be built up to requirements. Any hardship worked on the mare and colt this year may knock us out of just that much crop profit next year, and the next. The colts of 1917 are liable to see "good times on the farm" for the best of their lives.—The American Breeder.

RIGHT SORT OF PREPAREDNESS

Silos in one form or another date back quite a period; yet it is only within the last 20 years or so that they have come into anything like general use here in the west where the settlers have been slow in picking up eastern ideas. With the increased value of our lands, the acreage devoted to the growing of pasture grasses and hay is constantly diminishing until today with the stress of war bearing down upon us, we must face the problem of furnishing some economic feed for our stock. The present season with its alarming shortage of hay and roughage demonstrates the necessity of forearming ourselves against such exigencies in the future.

The stock farmers are fast realizing that the range is gone with its free grass and if they would succeed, they must not depend wholly upon the skimpage of pasture for the chief food supply. The high cost of producing foodstuffs during the past decade has turned the minds of many of our farmers toward the silo as the solution of the feed problem and during the last two or three years more of these preserving tanks have been constructed than in all previous years combined.—The Denver Field and Farmer.

GRAIN FOR BREAD SUPPLY

It seems from reliable reports that grain will be our greatest need in the food supply of the nation. The bread supply of the people will be a vital requirement in war or in peace.

Not only do we need bread but meat also—milk, poultry, and eggs, all of which will be more or less dependent upon grain.

Of the grains wheat is of most importance so far as the world's bread supply is concerned. Very few European peoples have any knowledge of corn as a bread stuff. They grow very little Indian corn, or "maize" as they call it, consequently their bread supply must come from other grains, principally wheat, rye, and barley.

The people of the southwest must grow many grains that may be used for bread. In addition to wheat we have corn, milo, kafir, feterita, all of which could be used to supplement the bread supply. Already the grain sorghums are being used as foods. These grains are nearly equal to corn in feeding nutrients for animals. When ground and prepared for human food, doubtless they would be about as rich in nutrients as corn meal.

As a means of increasing the food supply both in bread and meat the grain sorghums should be planted liberally. Under ordinary conditions they stand late planting and endure considerable drouth and hot winds. No grain crops are safer for arid and semi-arid regions and none are better adapted for very late planting. Even in humid regions these grain sorghums may be planted late as the sorghum midge, which causes light heads, seldom interferes with development when the heads form in dry summer weather. Every acre of grain will brighten our prospects for an abundance of food. For this reason plant every acre possible.—Farm and Ranch.

GET DOWN TO EARTH

Since the United States has entered the world war, many ordinarily level headed people seem to have lost their power of clear thinking. All sorts of plans are proposed. People talk of plowing up lawns to plant potatoes

when hundreds of acres of land might be used that now produce nothing. Well-to-do families seem to think the earth has ceased to bring forth and are trying to buy and store large stocks of food products, thus playing into the hands of speculators who are eager to take advantage of such opportunities.

Our country is perhaps entering the most serious crisis in its history, but that is no excuse for much of the hysteria that seems to have taken possession of us. Perhaps we may have an army of two millions in the field, but there will be ninety-eight millions left at home to carry on the ordinary duties of life. The sane thing to do is to perform with diligence the tasks of the day and hour. Nothing will help the nation more than to have its citizens get down to business in every line and quietly but efficiently carry

of Kansas. Yields can be maintained only by careful management. Skill is required in the use of all decaying vegetable matter in this state.—The Farmer's Mail and Breeze.

A QUARTER CENTURY AGO

Items from The Industrialist of April 30, 1892

The cadets engaged in target practice yesterday afternoon.

Mid-term examination yesterday was attended with the usual mild excitement.

The horticultural department has shipped 50 thirty cedars to the Beloit Industrial school.

F. A. Ring of Manhattan has presented the library with 12 bound volumes of the Scientific American.

Dr. H. S. Willard, '89, changes his INDUSTRIALIST address from San Francisco, Cal., to Des Moines, Iowa.

On the Basis of Service

Dr. Henry Jackson Waters

ORDINARILY you plan your course of action on the basis of advantage to yourself. Now you must plan it on the basis of service to your country. Not more than 5 per cent of our people will be called to arms. But we are all in this war. Each must do his part, and it must be that part which he can best do. Some must fight. Some must produce. Some must prevent waste. Some must conserve health. Some must get ready to reconstruct the world when the war is over. One service is just as patriotic and important as the other. The greatest calamity that can befall our country would be for our high schools and colleges to cease preparing men and women to bear the country's largest responsibilities. For every student called to the front, another should come forward to take his place. Keep cool! Think it all through. Find what service you can best render to your country. Then act!

on the many great industries upon which our prosperity depends. Perhaps no class is being less affected by foolish ideas and inconsistent proposals than the farmer, and upon the farmer who is now going about his daily work of preparing the soil and sowing the seed depends in large measure the success with which we can do our part in the war.—Kansas Farmer.

DON'T WASTE STRAW

Burning straw is like burning money, for straw means money to the man who knows how to use it. Nevertheless, 15 per cent of our straw is burned and 22 per cent more is disposed of in more or less unprofitable ways. Only about two-thirds of the crop is fed to live stock or used as bedding although these are the real ways to turn it into money.

Large amounts of roughages are necessary to the economical feeding of cattle, and there is no more efficient way of utilizing them than this. Straw lessens the need for expensive concentrates and when marketed as meat brings greater returns than are likely to be obtained by disposing of it in any other form. Indirectly the gain in soil fertility is enormous. There is no system of obtaining permanent soil fertility which equals in practicable advantages the feeding of live stock. The plowing under of straw adds little more humus to the soil than manure.

Burning straw means an almost total loss. The ashes, it is true, carry a certain amount of mineral matter into the soil but the quantity is too small to exert any appreciable effect. The usual explanation of the practice in those sections where it is followed is custom. But, because straw has been wasted in the past, there is no reason for wasting it now. Feed it or use it for bedding. If circumstances actually make the keeping of meat producing animals an impossibility, plow it under. Never burn it.

The proper use of straw will aid greatly in conserving the soil fertility

A game of ball between the college and city clubs yesterday afternoon resulted at the end of the sixth score in a tie of three runs.

The apple and plum trees, notwithstanding the many cold snaps, are full of blossoms, and all indications point to a good yield of fruit.

Ex-Regent C. E. Gifford of Clay Center called at the college on business Thursday morning. He found many improvements since his last visit.

The Rev. J. J. Lutz, pastor of the Methodist church, Manhattan circuit, visited the college yesterday during class hours and found much of interest in his first inspection.

G. K. and Miss Dora Thompson were called to Atchison on Monday to attend the funeral of their aunt, Mrs. Goffs, the mother of Miss Lillie B. Bridgman, '86; J. N. Bridgman, '91; and Miss Irene Bridgman, second-year in 1888-'89.

Mrs. Kedzie, Mrs. Winchip, and Professor and Mrs. Hood head a merry crowd of picnickers at Ft. Riley today. The party is made up of the special cooking class, the special sewing class, the postgraduates, and several young men from the third-year and fourth-year classes.

The college received a visit on Thursday afternoon from Messrs. Cook, Creetch, and McNasby of Herington, Mr. Harris of Solomon, and Mr. Wentworth of Topeka. They were shown the merits of the institution by Messrs. Kimball, Sheldon, and Ashbrook of Manhattan, and all expressed great pleasure in their visit.

Professor Walters gave for the Friday lecture yesterday an interesting and instructive lecture on the economic value of education, concluding that it pays in mere dollars and cents to educate every individual citizen, not only in the elements of learning, but in the essentials of science and industry. His statement that thought puts value into the products of labor was fully and strikingly illustrated by examples.

THE TREE TOAD

Orrick Johns in Poetry

A tiny bell the tree toad has,
I wonder if he knows
The charm it is to hear him
Ringing as he goes.

He can't have gone the journeys
He tells me to go on,
Here in the darkness
Of the cool, cropped lawn.

He cannot know the thrill
Of the soft spring wind,
Or the wonder, when you walk,
What will come behind.

He hasn't seen the places
I'd break my heart to win,
Nor heard the city calling
When the cold comes in.

He sings away contented,
And doesn't leave his tree,
But he sets my blood a-going
Where his song will never be.

SUNFLOWERS

The Kaiser and the ukelele must go.

We are awfully afraid that some of the May queens are going to catch cold.

It takes a man with a good deal of sense to make a fool of himself judiciously.

Maybe, in the stress of the war, somebody will discover what the Ben Davis apple is good for.

And yet, in the midst of all the war's alarms we are still hunting for the man who put the r-r-r-r-r in Ford.

These are the times in which we must call a spade a spade, and use it as a spade is intended to be used.

A girl named Fay can always get a job writing gush for a newspaper, even if she can't do anything else.

One of the worst features of the war will be the popular war songs that Irving Berlin and others will shell the market with.

There's no end to the economy that might be brought about in clothes. Now in the party dress, for instance, look what women can do without.

We are already beginning to wonder what those young people in Chicago, who married so unceremoniously a while back in order to get out of going to war, think about it.

We don't know much about Europe, but after three years' perusal of the official bulletins that they issue over there we are convinced that somebody on the continent is an awful liar.

PUREBREDS AND THE WAR

There is nothing in the conditions to warrant an opinion that the purebred beef cattle business will be adversely affected by the war. Breeders, in common with all persons engaged in any line of agriculture, can render the country a valuable service in this crisis by bending their energies to the production and conservation of every pound of feed and every beef animal possible. The question of how much they can produce, rather than of what they can get for it, is the one that should concern them most at this time.—American Hereford Journal.

George O. Greene, specialist in horticulture in the division of extension of the college, left Friday on a three weeks' orchard demonstration trip in southeastern Kansas.

Miss Louise Caldwell, specialist in home economics, division of extension, Kansas State Agricultural college, went to Kansas City Monday to spend four weeks lecturing on food economy under the auspices of the Star.

Captain L. O. Mathews, commandant of cadets in the Kansas State Agricultural college, is author of an interesting and forceful article on "Military Training and Higher Education" in Teaching, the pedagogical journal published by the Kansas State Normal school at Emporia.

AMONG THE ALUMNI

Harry Oman, '07, is ranching near Weiser, Idaho.

R. W. Hull, '08, and Mrs. Ethel (Berry) Hull, '07, are on a fruit farm near Orange, Cal.

Ralph H. Musser, '14, is agricultural agent for Canyon county, Idaho. His headquarters are at Twin Falls.

Harvey W. Baker, '10, is in charge of the greenhouses and nursery for the Valley Floral company, La Junta, Col.

Eugene Blair, '10, and Mrs. Winifred (Cowan) Blair, '11, were in Manhattan recently on their way to their home in Bard, Cal.

Clarence Watson, '12, and Mrs. Watson and their baby daughter are visiting Mrs. Watson's mother, Mrs. F. Van Vliet of Manhattan.

Miner Justin, '07, recently received the appointment of field agent for Kansas. He has nearly completed his work for a master's degree in the college.

C. I. Phelps, '12, has been appointed state bridge engineer and will work under the direction of W. S. Gearhart, highway engineer. His headquarters will be in Topeka.

Miss Florence Caton, '15, instructor in domestic art in the Illinois Wesleyan university, has accepted a position as assistant in household science in the summer session of Simmons college, Boston, Mass.

Prof. William Anderson, '98, of the department of mechanical engineering, Michigan College of Mines, is visiting friends in Manhattan. Mr. Anderson taught for seven years in the Kansas State Agricultural college, leaving in 1906 to go to Michigan.

W. C. Baxter, '13, and Mrs. Hope (Palmer) Baxter, '10, were in Manhattan recently on their way to San Francisco and other Pacific coast points. Mr. Baxter is an engineer in the Oklahoma oil and gas fields, with headquarters at Oklahoma City.

C. Roy Jaccard, '14, professor of agriculture in the normal school at Kirksville, Mo., is active in the campaign for the production and conservation of foodstuffs. Garden clubs have been organized, and the grange plans to purchase equipment for a canning factory with a daily capacity of 1,000 cans.

Judge and Mrs. Lee Monroe of Topeka have announced the engagement of their daughter, Lenore, to Mr. Clifton J. Stratton, '11. Miss Monroe is a graduate of Smith college, and has been in newspaper work. Mr. Stratton is on the staff of the Topeka Capital, and is regarded as one of the ablest newspaper men in the city.

BIRTHS

Born, to Dr. C. E. O'Neal, '16, and Mrs. Myra May (Munger) O'Neal, '12, on April 27, a daughter, Mary Alice.

Born, to Casey C. Bonebrake, '09, and Mrs. Cecil (Barnett) Bonebrake, '09, Santa Ana, Cal., on March 31, a son, Robert Loren.

IN ELECTRICAL WORK

Nine men, or 45 per cent of the class of 1916 in electrical engineering, are with the General Electric company. Four of them are at Lynn, Mass., while the other five are in Schenectady, N. Y. At Lynn are R. G. Baker, G. L. Farmer, A. N. Johnson, and O. I. Markham, while at Schenectady are B. M. Andrews, A. J. Herold, C. T. Halbert, A. E. Hopkins, and G. L. Usselman.

EASTERN ALUMNI BANQUET

The Kansas State Agricultural College Eastern Alumni association held its annual banquet, Saturday, April 14, at the Bronx Park boathouse. Those present were Mr. J. B. Dorman, '96, and Mrs. Dorman; Mr. L. A. Ramsey, '06, and Mrs. Ruth (Neiman) Ramsey, '06; Mr. A. L. Burns and

Mrs. Ruth (Gilbert) Burns, '15; Mr. Ross Newland, '06, and Mrs. Newland; Mr. Donald Ross, '07, and Mrs. Henrietta (Hofer) Ross, '02; Mr. and Mrs. William Mitchell; Mr. William Johnson and Mrs. Christine (Hofer) Johnson, '02; Mr. L. L. Bouton, '11, and Mrs. Myrtle (Hayne) Bouton, '11; Mr. George Fielding, '03, and Mrs. Fielding; Mrs. M. D. Hofer; Miss Wilhelmina Spohr, '97; Miss May Secrist, '92; Miss Nellie Baker, '12; Miss Minnie Copeland, '98; Miss Gentry; Mr. H. Clay Lint, '11; Mr. A. B. Carnahan, '05; and Mr. W. E. Deal, '16.

After the banquet an informal program was rendered and the following officers elected for the coming year: president, Mr. H. Clay Lint; vice-president, Mrs. A. L. Burns; secretary-treasurer, Mr. W. E. Deal.

AGRICULTURE IN CHINA

Canton Christian college, Canton, China, where C. O. Levine, '14, is teaching agriculture, is doing progressive work in improving farm practices in its region.

In cooperation with the Kwangtung Agricultural Experiment station, it held in April the first agricultural fair in south China.

The agricultural department of the college is cooperating in many ways with the Kwangtung Agricultural Experiment station, which is located across the river. In a recent conference with the agricultural staff of the college, the director, Doctor Wong, remarked, "If there is anything we have that you can use, I want you to feel free to ask for it and I will see that you get it." He has since given us 13 varieties of rice to use in variety and breeding experiments, and also a number of trees from the extensive nurseries of the experiment station. The college in turn has given him trees and plants, chiefly those from America and the Hawaiian Islands, which he did not have.

The college herbarium, of which Mr. Levine is in charge, has now about 900 species of plants, which have been collected within a radius of 40 miles of Canton. Enough subscribers for duplicate specimens have been secured to make this important work self-supporting, and to enable the survey to be extended into the interior regions of the province.

The Ling Naam dairy is now producing sufficient milk for local needs. Butter also has been made and could be produced in quantity if the agricultural department were better equipped with a building where its products could be handled. Mr. Levine and Mr. Taam have also butchered a number of times and have demonstrated that the famous Waters cure can be successfully used in making hams and bacon at Canton, as well as in Kansas.

TO THE COLLEGE ALUMNI

You seldom find an alumnus of the Kansas State Agricultural college not loyal to alma mater. The new graduate leaves the college with full confidence in himself and an abiding faith in the training he has received. This budding product of education finds surprises in the work-a-day world. His whole attention becomes engrossed with its problems. Life is an exacting taskmaster and the graduate, bending his energies to do his part, is separated from college problems and neglects to pay his dues to the alumni association.

A state institution is a creature of the people. It must have active friends among the people. Who are better friends to the college than its alumni? What can the alumni do unless organized? What can its officers accomplish without funds?

Our association takes an active part in each commencement, at which time many resident members respond loyally in time and effort in welcoming the new class as members. There is cash expense to this. We maintain an advisory council whose duty it is to know in what way college interests can be furthered. Here are some traveling expenses.

Dear alumnus, will you allow this reminder to bear fruit? Please mail

to our secretary, Miss Ada Rice, Manhattan, Kan., your annual membership dues—\$1.

If this remittance is a bore to you, our life membership provision brings full relief to yourself and succor to the deserving and needy student.

Life memberships, at \$20 each, make a revolving fund which when loaned to the students help some to graduate who might otherwise be compelled to drop out. This fund was opened last June. To date, \$860 has been loaned to 11 students, who, had they not received aid would have been compelled to leave school. Under no circumstances is this fund used for current expenses.

Will not the various class organizations interest themselves and secure a remittance of alumni annual dues for 1917.

WALTER J. BURTIS, President, Alumni Association. Fredonia, Kan., April 26, 1917.

ANNUAL MEETING OF KANSAS ENGINEERS NOW IN PROGRESS

Branch of National Organization Holds Sessions at Agricultural College

The Kansas branch of the National Association of Stationary Engineers is holding its annual meeting at the agricultural college.

Early arrivals spent Tuesday visiting points of interest about the college and the city of Manhattan. This morning the visitors were welcomed by S. F. Goheen, mayor of Manhattan, and A. A. Potter, dean of the division of engineering, who spoke in place of Dr. Henry J. Waters, president of the college, who is in Washington, D. C.

EBURIA QUADRIGEMINATA IS UNINVITED COLLEGE GUEST

Emerges from Oak Table in Journalism Practice Room

Eburia quadrigeminata made his debut at the Kansas State Agricultural college when he emerged from the top of an oak table which has been used in the department of industrial journalism six or seven years.

Eburia quadrigeminata is a borer which works in hard woods such as hickory, ash, and oak. He had worked himself out of a hole he had bored in the top of the table and was becoming accustomed to his surroundings when he was discovered.

The beetle was taken to George A. Dean, professor of entomology, who was unable to account for the insect's mysterious appearance. Another member of the entomology department stated that the quadrigeminata might have hatched from a latent egg which may have been laid some years before. Professor Dean now contemplates writing a scientific note on the appearance of the borer. The insect is not a new species in Kansas but it is the unusual manner in which it appeared that makes it peculiarly interesting.

ANOTHER TIE IN COLLEGE DEBATE—SEASON IS OVER

Argument Against Permanent Food Commission Wins Decision in Two Places

The last intercollegiate debate of the season for this college was a girls' event Friday evening between the Warrensburg Normal school of Warrensburg, Mo., and the Aggies, resulting in a victory for the negative team at both places. The advisability of appointing a permanent commission to regulate the price of foodstuffs, was the matter discussed.

The Aggie winning team, which debated in Warrensburg, was composed of Miss Gussie Johnson of Wichita, Miss Stella Gould of Willroads, and Miss Jewell Sappenfield of Clifton.

The affirmative team, which met the Warrensburg negative here, consisted of Miss Fern Roerick of Attica, Miss Helen Mitchell of Manhattan, and Miss Hazel Merillat of Enterprise.

Edward C. Johnson, dean of the division of extension of the Kansas State Agricultural college, went to Leavenworth county Friday to attend a hog cholera control association meeting held for the purpose of arranging to cooperate with the United States government. If the movement is successful a government veterinarian will be stationed in that county with headquarters at Leavenworth.

GO SLOWLY AT FIRST

BEGINNER SHOULD START SHEEP RAISING WITH GRADE STOCK

Most Important Consideration in Establishing Purebred Flock Is Selection of Foundation Ewes—Other Suggestions by Specialist

The inexperienced man should start with grade sheep, believes A. M. Paterson, assistant in animal husbandry in the Kansas State Agricultural college.

"If, after raising grades for a time," said Mr. Paterson, "he finds that he likes sheep and has learned something about them, the purebred flock may be established.

"The most important consideration in establishing a purebred flock is the selection of the foundation ewes. Few people realize the importance of good ewes. Many beginners in this work buy common stock and try to breed them up. It is much more economical and much quicker to select a few good ones and give them proper care.

SHOULD DECIDE ON BREED

"In establishing a purebred flock one should first decide on the breed to be handled. A breed should be selected that is adapted to local climatic conditions and is popular, in order that a ready market may be available for the surplus stock.

"Ewes typical of the breed they represent and uniform in size and conformation should be selected because they will raise more uniform lambs, and uniform lambs find a market much more readily than lambs that are off type and lacking in uniformity.

"Ewes that have a feminine, motherly appearance should be selected as this is an indication of prolific breeders and good mothers. The eyes should be large, clear, and bright, yet placid, indicating a kind disposition.

HOW TO SELECT EWES

"The ewes should show plenty of constitution by a wide spring of ribs and a deep, full chest. They should have a strong back with a thick covering of natural flesh. A little more length of coupling is desirable in the ewe than in the ram, and the hips should be wide apart and the hind quarters full. The body should stand squarely on the four legs, and the feet and pasterns should be strong. The wool should be dense and have quality, strength, and lustre.

"When establishing a grade flock, it is well to choose good, strong western ewes and a purebred ram of mutton type. This makes an excellent foundation. The ewes should be young, uniform in size and build, and show constitution and vigor.

"Each individual should be examined carefully for age and only those with good mouths should be chosen for breeding purposes."

KITCHEN SINK SHOULD BE DURABLE AND CONVENIENT

Material and Height Are Important Matters—Suggestions as to Cleaning and Care

Kitchen sinks should be durable, non-porous, easily cleaned, and at a convenient working height, according to Miss Rebecca Bartholomew, assistant in domestic science in the Kansas State Agricultural college.

Any cleaning powder or soap that contains a rough scouring agent is a poor article for cleaning sinks, believes Miss Bartholomew. Kerosene cuts grease. It should be applied with a cloth. When followed by soap and water, it is particularly effective.

Enameled iron sinks are durable and will last for years with proper care. They should not be cleaned with abrasive cleaning powders, as the enamel will wear off and cause a roughened condition. A sharp blow will chip the enamel and cause rust to attack the exposed iron foundation. These sinks come in a variety of styles, making it possible to get them in almost any dimensions and with or without drain boards.

Soapstone sinks are less expensive and are desirable where much dirty work is done. The soapstone, how-

ever, absorbs grease and wears away by constant scouring.

Copper and German silver sinks are attractive, easily cleaned, and sanitary. Because of the cost these sinks are seldom found in kitchens, but are satisfactory in butler's pantries for dish washing purposes.

The average sink should be from 30 to 36 inches in length, 20 inches wide, and eight inches deep. The drain boards should be at least 24 inches long and if there is but one, it should be on the left side. The drain board made of the same material as the sink is the most desirable, but a hard wood, such as oak, ash, or hard maple, may be substituted.

BEST WAYS OF TREATING OLD SOFT WOOD FLOORS

Use Linseed Oil as a Dressing in Kitchen and Dining Room, Says Specialist in Woodwork

Old floors of soft wood should receive special treatment. Dressing used for hard wood should not be applied, points out W. H. Ball, assistant in woodwork in the Kansas State Agricultural college.

"Raw linseed oil is the most satisfactory dressing for kitchen, bath, and dining room floors," said Mr. Ball. "It has no affinity for water and is more nearly waterproof than any other oil.

"Clean the floor thoroughly. If it has been painted, a good paint remover should be used. Heat the oil to not to exceed 180 degrees, and after removing from the fire add a little turpentine—not more than 5 per cent. This will cause the oil to penetrate into the wood more readily and will improve the wearing qualities. A coat of good floor wax may be applied over the oil if a polish is desired, and rubbed with a woolen cloth or weighted floor mop. This makes it easier to dust or sweep the floor."

If a dark color is desired Van Dyke brown, burnt umber, or some other dark color may be added to the oil although the oil itself tends to darken the floor. A common paint brush may be used to apply the oil, care being taken to spread it smoothly. Do not allow the oil to puddle as it will dry on the surface and will peel off or produce glossy spots on the floor. One gallon of oil will cover from 500 to 700 square feet with one coat, depending upon the condition of the floor and the amount of wear. It is well to apply two coats in the beginning and renew with a coat once a year.

A common method of treating old floors in bad condition is to use a good floor paint after the floor has been cleaned. A dark color such as a brown, produced by burnt umber or such neutral colors as will harmonize with the color scheme of the room should be used, in the opinion of Mr. Ball. It is not advisable to use a cheap varnish as it is not permanent and will not pay in the long run.

If it is desired to bring out the grain of the wood the floor is stained the color chosen and then from two to three coats of good floor varnish is applied. Shellac is sometimes used for the first or priming coat as the cost is from one-third to one-half that of varnish, but is not to be recommended for permanent results. In no case should shellac be used exclusively on the floor as it has a tendency to scar and peel off.

FOR LIQUOR, 118,000,000 BUSHELS OF GRAIN A YEAR

Brewers and Distillers Use Lower Total than Previously Stated

IN THE INDUSTRIALIST of April 11, in the report of an address by Dr. Henry Jackson Waters, an error was made in the statement of the amount of grain used annually by the breweries and distilleries of the United States. The figures should have been 118,000,000 bushels a year instead of 618,000,000 bushels. Authorities differ in their estimates of the exact amount used by the brewers and distillers, the estimate ranging from 90,000,000 to 125,000,000 bushels.

STATE NEEDS BIG HATCH

FARMERS AND OTHERS ARE URGED TO RAISE MORE CHICKS

Low Egg Production Is Attributed to Shortage of Laying Stock and Inadequate Feeding of Hens—Keep up Work until July

The nation is confronted with a serious shortage of laying hens, and farmers should do their part in solving one phase of the food supply problem by hatching more chicks than usual this season, believes Ross M. Sherwood, acting head of the Kansas State Agricultural college poultry department.

Because of the high feed prices farmers sold hens last fall that ordinarily would have been retained for breeding purposes and egg production. The low egg production this spring has been due to the shortage in laying stock and to the failure on the part of poultry raisers to feed their hens adequately.

Reports from the largest egg buyer in Kansas show that the egg production is from 20 to 40 per cent lower than it was a year ago, and last year's production was below normal. The government reports 38 per cent less eggs on cold storage on April 1 than at that time last year.

FEED LAYING HENS WELL

"Give the laying hens more feed," advises Mr. Sherwood. "They should have a good feed of grain at night and all the sour milk they can use during the day. The farmer should use the cheapest grain feed he has, whether corn, kafir, or feterita.

"It is too common a practice on the Kansas farms to let the hens shift for themselves during the spring and summer, or, at most to throw them a little grain. Birds fed in this way seldom give a profitable production the following fall and winter. The most serious shortage will come next November, December and January unless precautionary measures are taken.

"Keep on hatching until the first of July and have an abundance of young chicks to help bolster up the food shortage. Well fed chicks will weigh three pounds in 15 to 17 weeks, and this is a profitable time to put them on the market. It gives a larger carcass for food and is just as profitable for the farmer. A three pound chick will eat eight to ten pounds of feed in addition to what it picks up on the farm. There is, therefore, money in them even at the high price of feed.

WHAT TO FEED PULLETS

"The pullets should be well fed so that they will be ready to lay before cold weather. Caution should be taken not to develop small breeds too early, for pullets laying before September 15 are apt to molt in the fall, and thus lose three months of egg production.

"The most economical feed for Kansas is corn, kafir, milo or oats, together with a mash of three pounds of wheat bran, one pound of shorts, fed in a hopper and kept before them all the time. Give them all the sour milk they can drink. If pullets are fed in this way they will be profitable for egg production next fall and winter."

INCREASE FOOD PRODUCTION AND ELIMINATE ALL WASTE

Miami County Forms Organization to Cope with Food Situation

An organized effort is being made in Miami county to meet the present food production emergency. Definite measures were outlined and approved at a meeting of the farm bureau advisory board for increasing food production and eliminating waste throughout the county.

Attention was directed to the need for growing a maximum crop of corn this year, and to the possibilities in the growing of sorghums on all soils in the county to which they are adapted. Honey and sorghum molasses as substitutes for sugar were mentioned, and a plea made for an increased production of these two foods.

Suggestions for the elimination of waste involved the killing of rats, mice, and other rodents that consume

so much valuable food, the care of the garden and of the products of the garden that all may be used for food, and the spraying of gardens and orchards as a safeguard against insect pests and plant diseases. A week of orchard demonstration work has just been completed in this county and much interest was manifested. Dealers report they have been selling orchard spray materials in barrel lots and cannot keep a supply on hand.

The importance of saving all of the spring pig crop and of increased poultry operations was emphasized. The question of farm help has its place in this county organized effort, and steps will be taken to bring together the present season's supply and demand. Many bankers have joined this county efficiency force, one bank offering to furnish \$1,000 to each township in the county for one year, without interest, to assist in securing seeds and machinery, or to be used in other ways to stimulate capacity production.

The county chairman of the Kansas council of defense, Frank Spomable, was in attendance at the meeting and appointed officers of the farm bureau, township vice-presidents, and other members of the bureau, newspaper editors and bank cashiers as committeemen on the council of defense in Miami county. O. C. Hagans, county agent, has been active in organizing this work.

POULTRY RAISERS SHOULD GUARD AGAINST DISEASE

Disinfection of Incubator Prior to Resetting Is Advised by College Poultry Farm Superintendent

White diarrhea among baby chicks may in many instances be checked by the careful disinfection of the incubator just before the eggs are placed in the machine, in the opinion of N. L. Harris, superintendent of the poultry plant at the Kansas State Agricultural college.

"A wise precaution in starting the incubator is to disinfect the interior of the incubator before one places the eggs," said Mr. Harris. "Often after a hatch which shows no symptoms whatever of disease, the contamination left in the machine under a temperature of 103 degrees, will develop a culture of bacteria which will destroy the following hatch.

"Any disinfectant such as kerosene or other oils should be avoided. The most common method of disinfecting machines is to use a three per cent solution of any of the popular stock dips or crude carbolic acid. The interior of the machine should be saturated with this solution, the lamp should then be lighted and the door closed so that the fumes will penetrate to all parts of the machine.

"In disinfecting the machine a common whisk broom can be used. By this method the solution can be thrown into the corners and against the back of the machine. When formaldehyde is used as a disinfectant it is necessary to thoroughly air the machine before setting the eggs. If possible the machine should be placed in the sun for a few hours, so that the sun can shine directly into the egg chamber, as sunshine is one of the best germicides that can be found."

FARM BUREAUS AT WORK IN GREAT KANSAS FOOD DRIVE

Members Perform Effective Service in Interests of Production and Economy

The 17 farm bureaus in Kansas that have county agents are proving effective in the great drive for increased production and economy organized by the state council of defense.

In Chase county the county chairman, C. M. Gregory, as well as all the members of the county committee, are members of the farm bureau and the farm bureau organization will be used in the work done there.

In Miami county the president of the farm bureau called a county wide meeting for the first of this week. The county commissioners and a representative from each bank in the county will meet with the officers of the farm bureau to plan the campaign which is to be conducted in the county.

STOP WASTE BY STORAGE

FRUITS AND VEGETABLES SHOULD NOT BE ALLOWED TO ROT

Municipalities Could Conserve Food Supply by Employing an Expert to Take Charge of Produce Problem, Says Theodore Macklin

The most effective way of guaranteeing a supply of fruits and vegetables during periods of high price is to provide a means whereby large quantities of fruits and vegetables which annually go to waste on Kansas farms may be stored, asserts Theodore Macklin, in charge of agricultural economics in the Kansas Agricultural Experiment station.

"These commodities go to waste because the storekeeper cannot profitably buy them in larger quantities than he can possibly dispose of locally within a few days," said Mr. Macklin.

"In the summer and early fall when these vegetables and fruits are rotting on the ground, the storekeeper cannot make use of them because of lack of storage facilities and the additional time which it takes to attend to a duty of this character. Since the storekeeper cannot attend to it, and no other person in town is in a position adequately to handle small quantities of vegetables and fruits received from each farmer for the purpose of holding until winter, it becomes the collective duty, either of the producers or the consumers. There should be cooperation in maintaining a suitable place for holding these articles of food.

MUNICIPALITIES SHOULD ACT

"In no country have either producers or consumers cooperated to solve such a problem until experience has forced them to it. In this national crisis, however, the judgment of experts must be taken.

"It must be realized that the burden of short food supply rests heavily upon the municipalities, and therefore these municipalities without hesitancy, should provide funds for the employment of an expert, and should equip a place of business to which these small quantities of food products, such as apples and tomatoes, may be gathered and held over until they can be sold at a price which will guarantee payment of the cost of running such an establishment.

ADDITIONAL SOURCE OF INCOME

"Such a plan would provide the farmer with a source of income for things for which in the past he has received nothing. For the consumer, who is now unable to secure vegetables and fruits, it would guarantee a supply approximating the cost of doing business.

"This system would in no way conflict with any storekeeper or local buyer. It would be an additional function carried on by the town to meet its needs."

OPINIONS IMPORTANT IN CORRESPONDENCE WORK

Newspaper Man Should Be Fearless in Expression of Truth—Simple English Best, Says Cecil Howes

"A newspaper man without opinions is as bad as a man without a spine," declared Cecil C. Howes, Topeka correspondent for the Kansas City Star, in an address before students in industrial journalism, Kansas State Agricultural college.

"Of course, one can write a murder story with the bare facts, and that is all that should be printed about it. But a story on the workingmen's compensation law, the ballot system in Kansas, the policy of legislators towards the schools, should never be written or the public expected to read it without conclusions to some end."

It is necessary that newspapers have the plain, simple unvarnished facts as to all the news of the country, pointed out the speaker. The average American citizen, reading his paper, hasn't the time and doesn't want to take time to figure out the meaning of words or dig through the intricacies of an involved sentence.

"Staff correspondents should be absolutely honest, and there are few of

them that are not," said Mr. Howes. "Their influence is sure to wane whenever it is developed that they are not playing the game squarely.

"The discovery of the leak in President Wilson's peace note was not gratifying to those engaged in newspaper work. The humiliating confession of two Washington men that they had used their positions for personal gain was a shock not only to the profession but to the public as well.

"Scarcely a day passes in the course of which high officials in the state and government do not disclose to the newspaper men many important matters. This information is given them in confidence and not to be made public until a specified time. The violation of this trust is so rare that newspaper people are amazed at the testimony offered in Washington.

"It isn't necessary to fake news. The day of the newspaper faker is passed. The day of the newspaper liar has passed."

USE CARE IN SELECTION OF KITCHEN UTENSILS

Time Is Lost and Fuel Wasted as Result of Wrong Choosing—What Materials Are Best

Kitchen utensils should be durable, of smooth finish, easily cleaned, and suited to the purpose for which they are intended, points out Miss Rebecca Bartholomew, assistant in domestic science in the Kansas State Agricultural college.

"Much time is lost and fuel wasted as a result of choosing the wrong utensils for cooking," said Miss Bartholomew. "Tin makes a satisfactory utensil for most quick baking processes as it is light weight and heats and cools rapidly. The best grade is the heavy block tin. Pure tin is soft and pliable and consequently iron or steel often is used as a foundation. If this foundation material is exposed by scraping or scratching the utensil, rust will attack the iron."

Enamel, agate, and granite ware are made on iron or steel foundations, explained Miss Bartholomew. Should the enameling material become chipped the iron body soon will rust. Often utensils of inferior quality are sold as bargains and soon chip and rust. The pure white, and the blue and white enamel wares are not suited for cooking processes where high temperatures are necessary. The gray and the brown varieties are much more durable.

Aluminum is attractive and of light weight. There is no danger of chipping or rusting with this material. It is desirable for many processes of cooking as it heats rapidly. Iron is used for processes of cookery where a high temperature is necessary. It is durable if kept dry and free from rust. When not in use it should be coated with saltless grease to protect it. Earthenware is used for long, slow cooking or baking processes. The lids of earthen baking dishes should fit tight to keep in all moisture and heat.

Cooking utensils made of glass are attractive, easy to clean and sanitary. Such utensils have proved successful for baking processes when made of a material which can be subjected to high temperatures with no injurious effects.

When selecting cooking utensils, choose articles with smooth finished rims and made of one piece of metal. Avoid seams and useless curves as well as dirt catching handles. A heat resisting wood makes the best handle.

Utensils should never be bought until needed. Select articles of many general uses and few specific. There is no reason why a kitchen should have all utensils of one ware. Always consider the use and durability when selecting.

Miss Stella Mather, home economics lecturer, and Miss Minnie Sequist, specialist in home economics, division of extension, Kansas State Agricultural college, went to Jewell county Friday to conduct two one-week home economics schools. Miss Sequist is giving the work in sewing and Miss Mather that in cooking.

WIND TO BE AN ASSET

KANSAS BREEZES ARE EXPECTED TO AID IN GARDEN IRRIGATION

If Given a Chance Farm Windmill Will Serve Faithfully and Well in Lifting Water for Thirsty Gardens, Says Drainage Engineer

That the farm windmill should play an important part this year in the great food production campaign, is the belief of H. B. Walker, drainage and irrigation engineer, Kansas State Agricultural college.

"The farm windmill should be no 'slacker' this year," said Professor Walker. "It should be ready day and night to absorb the energy of the wind to lift water for thirsty gardens. Lack of timely rainfall is often the doom of an otherwise carefully handled and tended vegetable garden.

"This year the farm garden will be an important factor in reducing the cost of living. Accordingly, every precaution should be taken to prevent a failure of the garden crops. In those areas where the natural rainfall is not dependable, some simple method of irrigation should be provided."

SHOULD CONSERVE WATER

The farm windmill will serve faithfully and well in lifting water for irrigation if given an opportunity, Professor Walker pointed out. This faithful source of farm power, however, will not save the garden unless the owner cooperates in conserving the water pumped. The average windmill lifts water intermittently and at a slow rate. Consequently, if the water pumped is allowed to flow directly onto the warm, dry soil, a small area only can be satisfactorily covered. A small trickling flow does not spread laterally over the surface of the soil but it percolates deeply into the soil beyond the reach of the shallow rooted vegetables.

If the water lifted, on the other hand, is stored in tanks, barrels, or reservoirs, a volume sufficiently large can be secured in a surprisingly short time to effectively irrigate a much larger area. A barrel of water containing 3 1/2 gallons will cover a garden bed six feet wide by eight feet long, one inch deep. A quantity of water even as small as this, if properly applied, will greatly help the lettuce bed or the shallow rooted radishes. It is advisable, therefore, to use even an ordinary barrel for storage if nothing larger is available, in preference to direct pumping.

RESERVOIR IS DESIRABLE

A reservoir sufficiently large to hold all of the water the average windmill can pump in three or four days is much more desirable. The ordinary stock tank made of wood, steel, or concrete would serve well. A tank five feet wide by 10 feet long by two feet deep holds enough water to cover an area 15 feet wide by 40 feet long, and two inches deep. In a day of average wind the farm windmill will more than fill a tank of this size with water.

Where there is a good windmill a good garden is practically assured, if the windmill is given an opportunity to do its part. Without a reservoir or tank the windmill is practically helpless.

TALK CROPS FOR WEST

(Concluded from Page One)

the experiments covering a period of four years.

WHEN TO PLANT SORGHUMS

Mr. Getty's tests showed the best seeding dates for dwarf blackhull kafir to be May 15 to June 1; for Sudan grass, May 15 to June 15; for feterita, June 1; and for Freed's sorghum, June 15 to July 1. Tests as to seeding dates were all carried on at Hays for a period of three years.

The varieties of sorghums commonly grown in western Kansas were discussed by F. A. Kiene, jr., also of the station.

Miss Frances L. Brown, director of home economics, division of extension, will assist in a dressmaking school at Caldwell next week.

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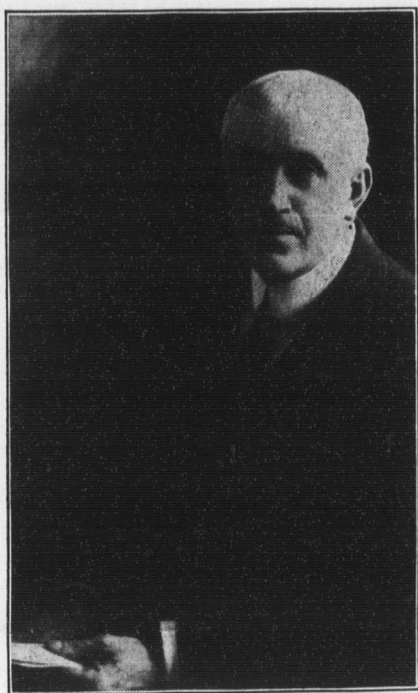
ART SHOWS IN CLOTHES

SO DOES LACK OF IT, SAYS WELL KNOWN CRITIC

Frank Alvah Parsons Makes Addresses Before College Students—Points Out Important Place Occupied by Advertising in Modern Life

"The things we wear attest our conception of beauty," declared Dr. Frank Alvah Parsons, president of the New York school of fine and applied arts, in speaking before the students of the Kansas State Agricultural college. Doctor Parsons delivered three addresses, one for the students in home art, one for those in journalism, and one at the general assembly.

"Beauty is an unknown quantity to the average American," said Doctor Parsons. "We know less about art than any other nation on earth. We



FRANK ALVAH PARSONS

thought very little about the esthetics of living until the last five years.

"Esthetic sense does not recognize art as a stimulant. Art is not appetite. Imitation, copying, is not art. It is exactly what it says it is.

SENTIMENTALITY NOT ART

"Sentimentality and art are not the same. They are not related in any way.

"Art is a state of mind—it is common sense plus an appreciation of the beautiful. My attitude toward a thing determines what that thing is to me.

"Fashion is often confused for art. Do you think it is more artistic to follow fashion than common sense? If you believe that art is more important than fashion, then don't be the slave of fashion. That does not mean, never have a thing that is in style, but always have things that are in style by making your own style. Then there will be individuality in dress.

FLOWERS NOT FOR PILLOWS

"Art is the expression of life. Nature is beloved by every normal human being. Because of this we are apt to think that nature is art. Nature is the inspiration for art but the two are widely different. Nature does not take into consideration the needs to which these objects are to be put. A flower growing in the field was never supposed to be embroidered on a sofa pillow or painted on a plate. If you are translating anything into art, conventionalize it.

"The girl who can choose the right clothes to wear is an artist. The person who can furnish a room properly is an artist."

ART'S PLACE IN JOURNALISM

That advertising is the greatest art of the present time, was the opinion expressed by Doctor Parsons in an address on "The Place of Art in Journalism." He placed architecture second and home decoration third.

"Advertising is developing the qualities of an object in such a way that they are expressed correctly to somebody who may want the article," said the speaker. "It does not matter whether those qualities belong to paving bricks or to food—they all have their individual qualities. That is advertising.

PUBLIC LOVES A KNOCK

"If you are going to write a story select the qualities that the story needs to teach. The public loves to have you knock somebody. It also wants to know facts. Make up your mind to give the people at least two things. If they want slush, give them enough so that they will have an appetite, then give them the essential facts.

"In selecting illustrations in advertising or newspaper work, remember that the human mind has the law of association going on all the time. If I present an object to the mind and start a train of thought, most human minds will follow the line of thought.

PICTURES SHOULD TELL STORY

"Pictures are a language in themselves. They are used not alone to get attention, but to interest the reader in the thing advertised. Be careful to use only such illustrations as tell the same story your words tell.

"In an advertisement put your intense color on the thing you are trying to bring out. Use your strongest color on the thing you wish to emphasize. Color is a language."

CONFERENCE TO DISCUSS OPENINGS FOR WOMEN

High School Girls of Kansas to Meet at Kansas State Agricultural College Thursday and Friday

Greater efficiency among women is the object of a vocational conference for high school girls to be held at the Kansas Agricultural college, May 10 to 12. Opportunities for women will be discussed by experienced persons in the hope that the many girls who will soon be leaving Kansas high schools and who are wondering what to do next, may be pointed to places of usefulness.

It was not the thought of those who planned the conference to lure the girls from the field of home, but rather to provoke serious thought on the part of the girls concerning the need for preparation for their life work, whether that work be homemaking or supplying a need in the business world.

Nursing, newspaper work, social service, the woman physician, agriculture for women, physical culture, music, costume designing, art supervision, institutional management, the dietitian, the stenographer and secretary, and the teaching of home economics, are some of the subjects that will be discussed at this conference.

An invitation was extended to each high school in the state to send to this conference at least one representative from the senior class who will come prepared to take back with her the messages of the speakers and present them to the girls of her school in order that the lives of these young women may be made more useful through the influence of the conference.

The federal bureau of soils is now cooperating in making soil surveys with the authorities of 19 states. It is expected that this number will be increased to 25 states in 1918.

As a result of one week's school-house meetings held by one of the western Kansas district agricultural agents in the interest of increased crop acreage and cooperation, 2,000 bushels of corn, kafir, feterita, millet, and barley changed hands in the district. Through these meetings the man who needed seed was put in touch with his neighbor who had a surplus.

TO KEEP DRIVE GOING

COUNCIL OF DEFENSE PUSHES BIG FOOD CAMPAIGN

Agricultural Production Committee Makes Concrete Suggestions for Valuable Farm Practices—Seed Available for Wheat

Test your seed.

Prepare a good seedbed for sorghum crops.

Cultivate corn while the weeds are young and easily killed.

Guard against damage to the first cutting of alfalfa through rain.

For summer fallowing, plow land five to eight inches deep.

CAMPAIGN FOR GARDEN CROPS

Maintain a campaign for increasing the planting of garden beans and sweet corn and for canning and drying these two standard crops.

The foregoing are suggestions made by the agricultural production committee of the state council of defense for keeping up the big Kansas food drive.

The committee further points out that there will be no question about obtaining plenty of good seed for every farmer who wants to plant wheat next fall. Some concern has been expressed about the matter in places where the wheat has winterkilled.

NOW NEEDED FOR BREAD

The state will produce from 50,000,000 to 70,000,000 bushels of wheat this year, it is estimated by the committee. Almost all will be suitable for seed. The wheat now on hand, the committee believes, is needed for bread more than for next fall's seeding.

Where land is to be fallowed, cultivation should begin as soon as the weeds have thoroughly started, or as soon as possible after sorghum planting is out of the way. Only such cultivation should be given thereafter as is necessary to keep down most of the weeds. The surface soil should not be worked into a dustlike condition; it should rather be left rough or cloddy.

KANSAS COUNTIES AREN'T SLACKERS IN FOOD DRIVE

Various Plans Adopted for Promoting Better Agriculture in Every Part of State

Chautauqua county is going to be no slacker in the big food drive in Kansas.

Seven men in the county have already put up \$7,000 to be used without interest to increase the acreage of money crops and to make cultivation as thorough as possible. Additional money for the same purpose is being pledged by other men, according to a report just made to the state council of defense.

According to the plan adopted in Chautauqua county, seed for planting will be furnished to any man who will work, the actual cost to be paid back by him November 15, when the crops are in. When necessary, feed will be bought and labor will be paid for. It is planned also to get help and where it proves necessary to transport it to the farm in the morning and back again at night, without expense to the farmer. Other counties in the state are lining up for war service through promoting better agriculture.

In Finney county, small companies have been formed to aid the farmers. One of these companies was formed by four Garden City men, who agreed to help a certain farmer put in 100 acres. Two or three other companies are looking after 160 acres apiece. One man has furnished the necessary seed for planting 600 acres. The banks of the county are lending money to finance farm operations.

In Chase county, a questionnaire was sent to every farmer, asking about his plans and needs. Practically all the men replied, giving valuable in-

formation as to farm conditions in the county. This will be used in formulating and carrying out agricultural plans.

Franklin county has established an employment bureau for farm labor. The Nemaha County Bankers' association as a body is cooperating in the food drive in its county. Personal letters have been sent to farmers and others in Johnson county, urging cooperation in putting into cultivation all the available land.

EXTENSIVE PLANTING OF SWEET POTATOES URGED

List of Those Who Have Plants for Sale May Be Had by Applying to F. S. Merrill

Plant the sweet potato as a substitute for the Irish potato and help maintain the food supply during the present crisis, is the suggestion of F. S. Merrill, assistant professor of horticulture in the Kansas State Agricultural college. The sweet potato will produce a larger yield than the Irish potato.

The plants may be set out any time after the danger of frost is over, in a sandy or sandy loam soil, according to Professor Merrill. It is essential that the ground be in a friable condition before the plants are put out and this requires that it be thoroughly worked before planting. With the use of a lister, ridges should be thrown up eight to 10 inches high, and the tops knocked off with a harrow or float.

The plants should be removed from the seed bed and set in these flattened ridges, either by hand or by machine, at a distance of 14 to 16 inches. In transferring the plants from the seed bed to the field, care should be taken to prevent them from drying out. The dirt should be packed firmly about the roots and a can of water poured in the hole at the time of planting.

The purpose of cultivating the sweet potato is to keep down weed growth and conserve moisture. Care should be used in cultivating to prevent breaking down of the ridges. The sides of the ridges may be cultivated with a machine but the only satisfactory method for getting to the tops is with the hoe.

Yellow Jersey, red Nausemond, pride of Kansas, and Nancy Hall are varieties that have given the best yield in the state. The southern queen has also produced heavy yields but is poor in quality.

If suitable plants cannot be obtained, a list of responsible persons who have plants for sale will be furnished, along with other desired information, upon application to F. S. Merrill, department of horticulture, Kansas State Agricultural college.

CLERGYMEN TO ENLIST IN GREAT ARMY OF PRODUCERS

Every Kansas Preacher Is Urged to Spend Vacation in Fields

That the 3,000 clergymen of Kansas will probably enlist in the great army of producers, is the prediction of the Rev. Walter Burr, director of rural service, division of extension in the Kansas State Agricultural college. Mr. Burr has volunteered to assist in filling silos during his vacation late in the summer.

"If each pastor would give his one month vacation toward farm production, an amount of work equivalent to that of 250 men working for one entire year would be done. Many ministers have already laid plans to do this and I think the majority will support the plan," said Mr. Burr.

Fifty-five new members joined the farm bureau of Jewell county in one week. A campaign for new members is now on and the goal has been set at 200.

TOMATO, WAR TIME CROP

VEGETABLE WILL MATERIALLY INCREASE HOME FOOD SUPPLY

Cultivation Should Begin When Plants Are Set in Soil and Should Be Continued as Long as Vines Will Permit

If in doubt as to what crop should occupy extra space in the garden, plant tomatoes. As a vigorous grower, a high yielder, and a vegetable which can be completely utilized—both fresh and canned—the tomato is outstanding among its garden neighbors.

Tomatoes may be transplanted in the garden at any time after the danger of frost is past, say specialists in the division of extension, Kansas State Agricultural college. In Kansas the transplanting season lasts until the middle of May. The gardener who has not provided plants should make every effort to secure a supply of standard varieties from a neighbor or commercial grower.

PLANT SEVERAL VARIETIES

If a uniform supply of fresh tomatoes beginning at the first ripening and lasting until frost is desired, it will be necessary to plant several varieties. Varieties that have given good results in the Kansas State Agricultural college garden at Manhattan, arranged in the order in which they mature their fruit are Earliana, John Bair, Landreth, Chalk's early jewel, Bonniebest, and Trucker's favorite. Dwarf champion and imp dwarf stone are good varieties of the tree sort.

The larger varieties of tomatoes should be set at least four feet apart each way. The smaller ones may be set at two foot intervals in rows three feet apart. Stocky plants of mature size should be used and should be set somewhat deeper in the soil than they stood in their previous location. If the soil is dry a cup of water should be used for each plant, but care should be taken to cover the puddled soil with loose dirt to prevent evaporation and baking.

CULTIVATION IS IMPORTANT

Cultivation should begin as soon as the plants are set in the soil and should be continued as long as the vines will permit. Moisture, when deficient, can often be profitably supplied from a nearby pump or hydrant. Care should be taken to stir the soil after each rain.

The yield of tomatoes can often be increased and the picking season lengthened by pruning and staking the vines. They are usually pruned to two or three stems and are then tied to stakes or trellises with soft material which will not bruise the plant. The pruning begins when the plants are from 12 to 15 inches high and two or three prunings and tyings are usually necessary. The quality of fruit from the staked plants is greatly improved as it is less subject to disease and decay.

FOOD CAMPAIGN POSTERS ARE PREPARED AT COLLEGE

This Is One Way of Getting Important Information to People

Posters on many phases of the food conservation campaign are being prepared by M. G. Burton, director of home study service in the division of extension, Kansas State Agricultural college.

These posters are being prepared for the Kansas state council of defense and 80 to 150 copies of each poster are being sent to each county chairman of the council to be posted in school buildings, store buildings, blacksmith shops, grain elevators, post offices, and various other public places, so they will be sure to come to the attention of every citizen in Kansas.

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H. J. WATERS, PRESIDENT Editor-in-Chief
N. A. CRAWFORD Managing Editor
J. D. WALTERS Local Editor
ADA RICE, '95, M. S. '12 Alumni Editor

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WEDNESDAY, MAY 9, 1917

SORGHUMS FOR WAR TIME

Sorghums are a Kansas war time crop. There are varieties adapted to all parts of the state, a crop is obtainable even under adverse weather conditions, and the yield will be of enormous value in reducing the world food shortage.

Sorghums are not grown for one purpose alone. They are useful for grain, for forage, and for sirup. Of course, a single variety will not adequately serve all these purposes, but the farmer may decide which purpose is most important to him and plant accordingly.

Plant sorghums.

A RURAL SCHOOL PROGRAM

With much of the responsibility for the success of the United States in the war resting upon the farmer, this is no time to neglect the problems of the rural school. It is only fair to the farmer, who with his family is performing essential patriotic service, that the schools in which his children are trained shall be of high standard.

There was held recently at Lincoln, Nebr., a rural school conference at which representatives of 22 states were present. It outlined a constructive program for the improvement of country schools. The program cannot be put into effect everywhere at once—a great deal of it probably cannot be carried out until after the war—but toward it men can and women can look, even in this time of stress and of difficulty. This is the program:

1. A school term of not less than 160 days in every rural school community.
2. A sufficient number of teachers adequately prepared for their work.
3. Consolidation of rural schools where practicable.
4. Teacher's home and a demonstration farm of five or more acres as a part of the school property.

WINNING WITH FOOD

The 6,500,000 farms of the country must feed 100,000,000 people; or each farm an average of 15 people. To put it another way: There are an average of five persons to the farm, or 33,000,000 people who must feed themselves and 67,000,000 others. Therefore the mobilization of our skilled and unskilled labor necessary to meet the government's labor requirements to prosecute its enormous military task tends to lessen the number of food producers, while no substantial plan is offered to encourage increased food supply.—B. F. Yoakum in Farm and Ranch.

FARM LABOR SITUATION

This is going to be a trying time for the farmers because of labor shortage. Young men are responding to the call of the army and navy who could serve their country as well in the field of production. Young farmers are going to the cities to get work at high wages in

factories. It is natural that many will respond to the call of the recruiting officers. If young farmers go to war, who can take their places? Surely not the city chaps who never pulled reins over a horse's back. Boy scouts may become quite valuable on the farms by a little patient coaching by the farmers, and it may come that the women will have a larger part than usual in farm work. The farm hand in overalls, is doing an important work for the nation. If every person will do that which he or she is best fitted to do well, the country will be more efficiently served than where everybody rushes into new work, upon the inspiration of a patriotic demonstration. We surely need farmers or the army will starve. Do your patriotic duty by producing every pound you can this season. Don't expect to get cheap help on the farm in times like these—nor in the future. Several million men have been put out of the labor market by war. You will get good prices for your products. Pay more for men who can help you.—Successful Farming.

THE DOG'S DOUBLE NATURE

The dog's two sided nature makes him a vexatious problem. He is sufficiently civilized to enjoy the companionship of man and to return with devotion, affection and faithfulness his master's care. He is obedient and mild mannered when he is at his best, but he is not always at his best. He is a wolf as well as a dog and his wolf nature is sometimes predominant.

Some dogs are nearly all wolf, while others are sometimes doglike and sometimes wolflike. The dog is often man's faithful friend, and he is sometimes the enemy of man and of man's other animals. Many dog lovers and dog owners emphasize the dog's good qualities and ignore his susceptibility to the call of the wild, but any fair-minded person must admit that he can be a sad nuisance as well as a responsive and affectionate companion. What is to be done with such a perverse and yet attractive animal?—Hartford (Conn.) Courant.

MOBILIZING SCHOOL CHILDREN

A tremendous amount of energy is represented by the thousands of boys and girls in our towns and cities, and the idea of mobilizing the school boys into a farm army to help supply the labor deficiency on the farms seems most attractive. The real farmer, however, does not see much in this proposal to help him to till his undermanned acres by using untrained school boys. As one farmer said, "It would be a fine thing for the boy but mighty hard on the farmer." We hear on every hand how important it is to put the new army recruit through a course of training that will make him really serviceable as a soldier. It takes longer to make a farm soldier that is worth his salt than one who carries a rifle and fights in the trenches.

We are by no means deprecating the importance of directing the energies of boys and girls into productive channels. The boys' and girls' club work all over the country has demonstrated the wonderful possibilities of directing the activities of young people along right lines. It is simply astonishing how much food can be produced and preserved for future use by a boy or girl working under proper direction. The club work in Kansas is well organized and should by all means be encouraged to the limit. Additional club leaders and garden supervisors should be employed and the energies of the children utilized in making substantial additions to the family larder. The training they receive in habits of industry and thrift will make them more useful as men and women and this part of the work should not be overlooked. The nation will need trained men and women after the war is over. In attempting to help out in the present labor shortage on the farm by sending school boys to take the places of seasoned and trained men, we are not looking into the future. England has already admitted her mistake in taking boys from school to perform labor on the farms and in the

factories as she did in the early days of the war.

We would urge the children to enlist in the food production division of our army, but do it by joining clubs and groups that work under suitable leadership.—Kansas Farmer.

VALUE OF PHOTOGRAPHS

One of the prime considerations for the herd of pure bred stock that has been accumulated is the profitable sale of such stock as may form a surplus. While it is an undisputed fact that good advertising is one of the main attributes to good stock sales, the inquiries from such advertising must, however, be followed up by good letters and accurate information if the mail-order business is to be used.

One of the best follow-ups for the average stockman today is a good photograph of the animal to be sold. When an inquiry in answer to an ad-

in fullness will appear to better advantage if the near hind foot stands well under the body allowing the flank to drop as low as possible. Weakness of the quarter and twist will be emphasized by a wrong position of the hind feet on the ground. The position of the feet on the ground should be watched closely as closeness together will suggest narrowness of body.—The American Breeder.

A QUARTER CENTURY AGO

Items from The Industrialist of May 7, 1892

President Fairchild attended a meeting of the state board of education in Topeka Wednesday afternoon.

The total receipts from collections for educational exhibit at the Columbian exposition to date is \$1,929.

The pipe ditches, which have for a year past marred the lawns, are being sodded, and with favorable weather

Gardens and County Agents

The Outlook

NO one who is starting a garden for the first time should hesitate to avail himself of the advice of his state agricultural college, and, where such an official exists, of his county agricultural agent. Land which is planted and which is not cared for represents a greater waste than if it had not been planted at all. This is something which should be borne in mind by the thousands who are venturing into the garden world for the first time this spring. There is a chance that unless these garden activities are properly supervised there will be a waste of valuable seeds and no less valuable labor. It seems to us that the present time represents an admirable opportunity for the extension of the activities of the county agricultural agents who are now so widely scattered throughout the country. These agents should during the present year be provided with assistants to help in the planting and the care of town and village gardens. Communities might well appoint garden supervisors to advise and aid all those who are venturing into the new field of food production.

vertisement comes to your farm you have in mind the animal on your farm that will best suit the requirements set forth in the letter. You might write a complete description of the animal to the prospective purchaser which would carry little weight with him. If you as a salesman are inclined to underestimate your own stock, you will write a letter that will show the animal off in a poor light, rather than a good light. On the other hand you might be inclined to give a better description than the animal would warrant and on this account you would have a disappointed purchaser when he received the animal.

This point of disadvantage often can be overcome with a good photograph of the animal that you think will meet the needs of the prospective purchaser. It goes without saying that this photograph should not be retouched in any way. The picture should show the animal as accurately as possible, neither emphasizing the strong points at all nor accenting the weak points.

There are many points to be considered in the pose of the animal if the weak points are not to be brought out with more force than the strong points. In considering the head, if it is too long for a beef type, a front view showing the face should not be taken. If the head is just a fair beef head, a quartering view should not be taken. With either of these types of heads a side view will show the heavy jaw muscles, the thickness of muzzle, and leave a fair impression. If the head is held too high while the animal is photographed there is a tendency to exaggerate any lightness or length of neck and that is not desirable from a beef standpoint. On the other hand if the head is allowed to drop too low the slight crest is emphasized.

A fullness or slackness behind the crops is emphasized by placing the near front foot forward or back. Too much stretch will emphasize slackness of back and loin. If there is a lack of fullness in the flank, stretching emphasizes this point. The flank that lacks

the campus will soon be restored to all its former beauty.

A. A. Graham of Ulysses, Nebr., a brother of Secretary Graham, stopped over between trains on Monday last on their return from the funeral of their father at Dighton.

President Fairchild spent Tuesday night in Leavenworth, where he delivered a brief address before the Northeast Teachers' association, upon "Industrial Training in Education."

F. A. Waugh, '91, writes from Helena, Mont., of pleasant surroundings in his new work as editor in chief of the Farming and Stock Journal, one of the "Big 4" of the Journal Publishing company, of which Russell B. Harrison is president.

The first number of the Chandler (Okla.) News, under the management of H. B. Gilstrap and G. V. Johnson, '91, is received. It is a handsome six-column quarto, well filled with home news and editorials, and its advertising columns give evidence of being duly appreciated by the business men of Chandler.

A division of the third-year class presented orations in chapel yesterday afternoon as follows: A. F. Niemoller, "Stock Speculation;" L. C. Olmstead, "Our National Defenses;" R. E. McDowell, "Examinations;" C. F. Pfuetze, "Tammany and Quay;" J. D. Riddell, "A View of Our Pension System;" J. M. Stearns, "Spring;" J. A. Rokes, "How to Americanize the Foreigner;" H. L. Pellet, "A Description of New Orleans."

Samuel S. Cobb, '89, and Miss Carrie K. Hunter, second-year in 1887-'88, were married Wednesday evening, May 3, at the Presbyterian church, Doctor Milner officiating. A reception followed at the residence of the bride's uncle, Mr. W. P. Higinbotham. After visiting St. Joseph and St. Louis, the young couple will be at home after May 25 at Wagoner, I. T., where Mr. Cobb is engaged in the drug business.

WHEN MOTHER SINGS

Isabel Butchart

When Mother sings
You think of fire-lit nurseries
And pussy cats and things.

When Mother sings
You shut your eyes and think of—
Oh, lots of lovely things!
Of sounds that feel like flowers,
And stars that fade and glow,
And colors singing dreamily
That curtsy as they go.

SUNFLOWERS

Can anybody remember when a four dollar shoe was a mark of affluence?

Germany's population is on the bum. All who are sorry make it known by the usual sign.

It is too bad that "Papa" Joffre didn't get to see the old union station at Kansas City.

We still believe that just as much can be accomplished by the conservation of gray matter.

There is many a young married man who wishes that his mother-in-law hadn't raised her girl to be a soldier.

Some congressmen seem to think that their part of the great production campaign consists in raising objections.

The two kinds of husbands that are now causing their wives the most trouble are those who just will go to war and those who just won't.

Reports of the recruiting in the east indicate that their patriotism is composed of the stuff with which we used to inflate Fourth of July balloons.

A SPRING POAM

Come on, Spring,
We're tired o' waitin',
You're so cussed
Aggravatin';
Birds can't even
Do their matin',
Come on, Spring,
We're tired o' waitin'.

A NOTE TO THE CZAR

Dear Nicky:

What on earth has become of you? We haven't heard from you since we don't know when. It is rumored that you have turned to the production of geraniums and hollyhocks. Congratulations, Nick. Can you arrange to take on an extra hand before long? Bill, you know, will have to have something to do.

Let us hear from you soon.

Yours truly,
Allovis People.

THE HORSE AND KINDNESS

One of the most celebrated horsemen of Great Britain, a man who has probably trained and handled more horses than any other man in England for the past 25 years, writes:

"Cut out the use of whips, spurs, bearingreins, and all other forms of cruelty. Have confidence in your horse, and let him see that he can safely have perfect confidence in you. Show him that, though you intend to be master, you will treat him always with the utmost consideration and kindness, and you will find that you will have the affection and trust of your horse, and get the best possible work from him.

"I have worked on these principles all my life, with bad and unwilling horses, and have proved them winners every time."

To this man, Lieutenant M. B. Remington, are turned over all the horses and mules at the remount station which are considered unmanageable and condemned to be destroyed. By methods of kindness and intelligence he renders them all docile and serviceable.—Our Dumb Animals.

George O. Greene, specialist in horticulture in the division of extension of the agricultural college, is on a three weeks' orchard demonstration trip in southeastern Kansas.

AMONG THE ALUMNI

J. L. Lush, '16, who is teaching at Pratt, was a college visitor Saturday.

Cecil Haines, '14, spent last week end visiting his parents and college friends.

Mrs. Stella (Kimball) Tucker, '94, of Arcadia, Fla., is visiting at the home of her parents, Mr. and Mrs. R. H. Kimball.

Miss Grace Allingham, '04, is one of the proprietors of the English tea room, 702 West Seventh street, Los Angeles, Cal.

Miss Alma Halbower, '14, of Anthony was visiting college friends last week. She takes up work in Massachusetts shortly.

Miss Georgia Canfield, '12, is teaching domestic science at Alliance, Nebr. She expects to attend summer school at Ames, Iowa, this year.

L. D. La Tourrette, M. S. '15, who has been teaching in a high school in Phoenix, Ariz., is now deputy sheriff of Maricopa county, Arizona.

Miss Louise M. Spohr, '99, has accepted a position as superintendent of the Dixon Public hospital, Dixon, Ill., at a substantial increase in salary.

Mrs. Harriet (Nichols) Donohoo, '98, of Tucumcari, N. M., with two children came last week to make an extended visit with her mother. She will remain until after commencement.

R. V. Adams, '16, has returned from Washington, D. C., where he passed the physical examination for an appointment as assistant paymaster in the navy. He will soon complete his year's work in the Paola high school.

Miss Lydia Hokanson, '16, of Woodbine, in sending her dues, writes: "I am sorry that it will be impossible for me to be back for commencement this year, but I hope a large number of alumni will be present at the annual banquet."

Miss Christine Rentschler, '13, writes of her enjoyment of her work in the Noyes hospital in St. Joseph, Mo. She has held the position of dietitian and housekeeper since the opening of the hospital in May, 1916. It is one of the best equipped hospitals in the state.

MARRIAGES

ANDERSON-MOORE

Miss Mable Anderson and Mr. Benjamin Moore, '17, were married at the home of the bride's parents in Manhattan on Friday, May 4. They will reside on a farm near Brownville, Nebr.

FIFTH YEAR REUNION

A big reunion will be held by the class of 1912 in commencement week. Most of the members have written to the officers, in response to personal letters, that they expect to be in Manhattan for the June meeting. This is really just carrying out the plans made during the senior year, for the members agreed at that time to make a special effort to return every fifth year. A large number of the members expect to arrive not later than Monday evening, June 18, and many will arrive Sunday, or earlier.

The officers of the class of 1912 are F. B. Nichols, 510 West Thirteenth street, Topeka, president; and Miss Berta Chandler, Manhattan, secretary.

CANNING DEMONSTRATIONS IN LEAVENWORTH CITY SCHOOLS

Dean Edward C. Johnson Will Address Parents and Teachers

Edward C. Johnson, dean of division of extension, Kansas State Agricultural college, has been asked to address a mass meeting of parents and teachers in Leavenworth, May 11. Plans are being made by the local board of education and the county farm bureau to establish canning demonstration schools in the 10 school buildings of the city.

Three days of each week will be used for demonstrations and two days will be devoted to the canning of products for those who do not have the proper equipment at home for doing this work. Cans, sugar, and the necessary equipment will be furnished by the city to any needing this help. Competent teachers will be in charge of these demonstration schools.

PROVIDE ADEQUATE SUPPLY OF ROUGHAGES FOR THE COW

Price of Concentrates Will Continue To Be High

Grow an abundance of feed for the cow this season, advises A. S. Neale, specialist in dairy husbandry, division of extension, Kansas State Agricultural college.

"Already the price of concentrates is 'out of sight.' Prices will continue high unless these concentrates are replaced by the cheaper roughages," said Mr. Neale. "Every farmer should plan to grow plenty of alfalfa or clover, and silage. If alfalfa or clover cannot be grown in your section substitute another leguminous crop, such as cowpeas.

"During the next 12 months the production of dairy products will be due largely to the feeding of roughages instead of concentrates as has formerly been the case.

"Dairy cows of quality receiving nothing but roughages can produce 200 to 250 pounds of butter fat annually, provided the roughage is fed in abundance and is composed of a combination of silage and a leguminous hay. Of course poor cows will not do so well on this ration."

PACK MEATS CAREFULLY FOR WARM WEATHER USE

Exclusion of All Insects Is Important Factor in Home Packing, Points Out A. M. Paterson

That farm cured meats can be safely kept so that they will be palatable and wholesome for summer use, is the opinion of A. M. Paterson, instructor in animal husbandry.

"Smoked meats may be kept in the smokehouse for some time after smoking provided it is dark and well ventilated," said Mr. Paterson. "A cool, dry cellar or an attic makes an excellent place to store meats. The main thing to remember is to keep the flies away and have a free circulation of dry air. A damp atmosphere will cause the meat to mold.

"Packing the meat in oats or other grain is an excellent practice. Before packing in the grain, cayenne pepper should be sprinkled over the meat. Another good practice is to wrap the pieces in parchment paper or cheese cloth and then cover the whole thing with a piece of heavy burlap. This wrapping can be covered with yellow wash to insure the exclusion of all insects."

In making the wash, to each 100 pounds of meat use three pounds of barium sulphate, .08 pounds lead chromate, .06 pounds glue, and .40 pounds flour. Mix the flour in a half pint of water, carefully rubbing out all lumps. Dissolve the lead chromate in a quart of water. Add this last solution and the glue to the mixture of flour and water. Then add the barium sulphate and mix thoroughly. Apply the wash to the burlap covering with a brush.

A. S. Neale, specialist in dairy husbandry in the division of extension, is working on an ordinance for Kansas City, Kan., for the regulation of dairies.

J. H. Arnold, a representative of the United States department of Agriculture, Washington, was at the agricultural college Thursday to confer with Edward C. Johnson, dean of the division of extension, in regard to the farm labor situation.

W. A. Lloyd, in charge of county agent work in the northern and western states in the United States department of agriculture, visited Edward C. Johnson, dean of the division of extension, Wednesday, to advise with him in regard to the county agent work.

KANSAS A MELON STATE

SOIL AND CLIMATIC CONDITIONS FAVOR PRODUCTION OF FRUIT

Success Will Depend Largely upon Care Plants Are Given—Thorough Cultivation Is Necessary—Varieties Adapted to Kansas Growth

The climate of Kansas is adapted to successful melon culture and wherever the soil is suitable the fruit may be grown either for home use or for the market, according to the department of horticulture in the Kansas State Agricultural college.

Melons grow best on a sandy loam or light soil which contains sufficient humus, is reasonably free from weeds, and well drained. If the soil is too rich in nitrogen, the melons are likely to be soft and rather tasteless, and will not keep or ship well.

The best results are obtained where melons are planted in soil that was plowed deep the preceding fall and thoroughly pulverized in the spring before the seed is planted. Heavier soils that tend to pack may require shallow plowing in the spring before planting. The lighter soils, however, may be sufficiently worked down by disking and harrowing.

DEEP PLOWING IS INJURIOUS

Deep plowing in the spring is injurious since the natural tendency of the melon plant is to produce a shallow root system. To attempt to induce the roots to penetrate too deeply into the ground causes a rank growth of vines but usually checks fruit development.

The seed should not be planted until all danger from freezing and low temperature is past. The seeds are planted in hills from nine to 12 feet apart for watermelons and six to eight feet apart for cantaloupes, depending upon the fertility of the soil and the character of the vines.

From six to 10 seeds should be planted about one inch deep in each hill and the soil well packed over them. If the danger of injury from cut worms is great, a larger number of seeds should be planted in each hill. After the plants are well started, they should be thinned to two or three strong plants to the hill.

CULTIVATION IS IMPORTANT

Thorough cultivation is necessary and the success attained will depend largely upon the care the plants are given. Weeds must be kept out and the soil should always be loose around the growing plants.

The results of extensive variety tests carried on by the Kansas State Agricultural college, together with the opinions of expert melon growers, show that Kleckley sweet, Tom Watson, Monte Cristo, sweetheart, and Dixie are the varieties of watermelons best adapted to Kansas conditions. Among the varieties of cantaloupes that have been tested, results show that Jenny Lind, princess, emerald gem, hoodoo, and Hackensack are best adapted to conditions in this state.

GROW TWO CROPS WHERE ONE ORDINARILY IS PRODUCED

Companion and Succession Cropping Advocated by Specialist

Practice companion and succession cropping in the garden this year and increase the yield of garden produce, is the advice of M. F. Ahearn, associate professor of horticulture in the Kansas State Agricultural college.

"Companion cropping is the growing of two or more crops side by side in the same section of the garden," explained Professor Ahearn. "Lettuce, for example, may be grown between rows of cabbages. The time of maturing of vegetables planted in this way should vary so that the short season crop will be out of the way before the more slowly maturing crops require all the space.

"Plant onion sets, lettuce, and radish with early cabbage, lettuce between tomato plants, pole beans with corn, and squash with corn. Carrots, early turnips, parsnips, radishes may be drilled in rows between staked peas.

"Succession cropping is the utilization of the ground after the first crop has been harvested. The ground should be carefully prepared for the second crop. Space that has been used for early crops like lettuce and radish may be used for celery, tomatoes, egg plants, and peppers. Many other successions may be worked out to suit special localities.

"The market this year calls for the largest yield from the gardens that may be procured. Every available spot in the plot should be used."

ENGINEER'S WEEK IS ADJUDGED A SUCCESS

Meeting of Kansas Branch of National Association of Stationary Engineers Was Feature

Last week was a big one for the engineers at the Kansas State Agricultural college.

The Kansas branch of the National Association of Stationary Engineers held its annual meeting here May 1 to 4. The Tuesday chapel hour was given over to the students of the engineering division. Saturday night a parade was held. This was scheduled earlier in the week, but was postponed because of adverse weather conditions.

The line of floats and the mechanical devices showed in a unique manner how fertile was the mind of the engineer and what wonderful things he can accomplish. The display of lights as worked out by the students and faculty of the engineering division, presented an attractive appearance. The electricity was generated by dynamos installed on the wagons by the engineers.

The parade was headed by a miniature tractor designed by W. W. Carlson, assistant professor of shop practice, and was constructed by the senior mechanical engineers.

The delegates to the convention were welcomed Wednesday morning by F. S. Goheen, mayor of Manhattan, and A. A. Potter, dean of the division of engineering. Dean Potter emphasized the value of an education to engineers. A display of engineering equipment was a feature of the meeting.

F. R. Hunter of Parsons was elected president of the organization, and other officers named were E. H. Burg of Fort Scott, vice president; J. M. Van Sant of Topeka, secretary; and J. R. Stone of Leavenworth, treasurer. The 1918 meeting will be held in Topeka.

An efficient plant, instruments to show what is taking place, and men to interpret the instruments and record the results are requisites in power plant management, according to Joseph Harrington of Chicago, advisory combustion engineer, who spoke before visiting engineers, and students and members of the division of engineering, Thursday afternoon. His subject was "Power Plant Economy."

"Eternal vigilance is the price of efficiency," said Mr. Harrington. "There must be incentive to give proper care."

MILK ROOM IS A NECESSITY IN SUCCESSFUL DAIRYING

Room Should Be Screened and Kept in Sanitary Condition

A milk room is a necessity in dairying, according to W. E. Tomson, instructor in dairy husbandry in the Kansas State Agricultural college.

A milk room is needed at all times but is particularly important in warm weather, pointed out Mr. Tomson. Milk must be kept away from flies. The room should be tightly screened and kept in a sanitary condition.

The milk room affords good facilities for keeping the milk cool. This is essential because when the temperature of the milk is higher than 50 degrees, undesirable bacteria that cause the milk to spoil in a short time are likely to develop.

Nearly 70 students, graduates, and professors of the Kansas State Agricultural college are now awaiting orders to report to Fort Riley training camp, that many persons having passed the physical examination. When orders were first received to take applications, a maximum of 60 was set as the goal for the agricultural college by Captain L. O. Mathews, commandant of the cadet corps.

ONE CABBAGE EACH DAY

THIS SHOULD BE PROVIDED FOR FAMILY TABLE, SAY SPECIALISTS

Start Fight on Cabbage Worms as Soon as Plants Have Been Set Out, Advises Committee of Kansas Council of Defense

A cabbage a day for the family table is urged in the call to arms on vegetable lines just issued by the committee on gardening and truck growing, Kansas council of defense.

To raise 365 cabbages will require only 7½ rows 100 feet long—one twenty-third of an acre. Plants should be set out at once.

Parsnips and carrots, it is pointed out by the committee, are used by the average American family sparingly, a few carrots now and then to flavor the soup, and an occasional mess of parsnips in the spring. They merit a more extended use. Half a dozen rows of each 100 feet long will make an applicable drive on the H. C. L. at a cost of 25 cents for parsnip seed and 10 or 15 cents for carrot seed.

PARSNIPS KEEP IN GROUND

One important feature of parsnips is that they keep in the ground. Freezing does not hurt them. A supply should be put in the cellar or "pit" to be drawn on when the outside crop is frozen up. The great service of parsnips is as a connecting link in the vegetable succession, for a month or two after the ground thaws. Then they occupy an important place in the menu of the housekeeper who knows their value.

That it will pay in dollars and cents to take care of the cabbage crop this year, is the opinion of M. F. Ahearn, associate professor in horticulture in the Kansas State Agricultural college.

Cultivate the crop, keep down weeds, and fight insects, is the advice of Professor Ahearn. The most dangerous insect enemies of the cabbage crop are the cabbage worm, the cut worm, and cabbage aphids. Cabbage plants are usually set in the field in rows 30 inches apart and 13 to 18 inches apart in the row.

COST OF ACRE OF CABBAGES

The cost of planting and caring for an acre of cabbage is as follows: fertilizer, \$5; plowing, \$2.50; leveling and harrowing, \$1; seed, 50 cents; growing plants, \$1.80; setting plants, \$6; cultivating and ditching, \$2.50; hoeing, \$2; irrigating, \$1.50; cutting and hauling, \$10—total, \$32.80.

Don't wait until the cabbage leaves are riddled by worms—go after the worms as soon as the plants have been set out, advises the committee on insects, Kansas council of defense.

Dusting the leaves with a poisonous mixture is a practical method of destroying the cabbage worm in patches of ordinary size. One pound of Paris green or five pounds of finely powdered lead arsenate is mixed with 10 pounds of hydrated lime or dry flour. The mixture is placed in a flour sack or in a can with top or bottom finely perforated. The operator walks between two rows with a bag or can in each hand and shakes out the poisonous dust so that it settles on the leaves. Worms eating of these leaves will die in a day or two.

HOW TO COMBAT WORMS

The work should be done when the leaves are dry and there is little wind, and repeated at intervals of one to two weeks, depending on how often the rains occur. There may be four or more generations of cabbage worms in a year, so that constant vigilance is necessary.

For patches of three acres or more, spraying with a barrel pump or other large sprayer is suitable. Half a pound of Paris green or two pounds of powdered lead arsenate may be stirred into 50 gallons of water for the spray. The addition of two pounds of soap or three pounds of flour in paste form will cause the liquid to adhere better to the smooth cabbage leaves.

CO-OPERATIVE CANNERIES TO SAVE FOOD PRODUCTS

WILL PROVE HIGHLY SUCCESSFUL IN SMALL TOWNS AND COMMUNITIES WHERE MANY FRUITS AND VEGETABLES ARE GROWN BUT MARKET IS LIMITED

Small coöperative canneries will provide a practical means for the saving of surplus fruit and vegetable products in many Kansas towns, villages and rural communities, asserts Otis E. Hall, state club leader in the extension division of the Kansas State Agricultural college and secretary of the committee on gardening and canning, state council of defense.

The plants will probably prove to be most successful in the smaller towns and communities where fruit and vegetables are grown in abundance and where the market for the fresh products are limited.

The cost of installing a medium-sized plant is not excessive. A first-class hot water outfit with a daily capacity of 200 to 1,000 quarts can be installed for from \$50 to \$100, and a steam pressure outfit with the same capacity can be installed for \$100 to \$500. This of course does not include buildings, but special buildings are not necessary. It is likely that in most cases the work could be done in school buildings or homes. Empty store rooms or farm buildings might be used, provided of course that water is accessible and that they can be made sanitary and convenient

MAY HAVE OUTDOOR PLANT

Some of the factories that make equipment for these small canneries suggest that the plant can frequently be placed out of doors and all the work be done under the shade of trees.

Before a coöperative canning plant is installed, a definite plan for financing it should be adopted. The first cost of equipment must be met and unless the plant is wholly coöperative, the salary of a superintendent and the expense of labor and materials used must be provided for.

There can be no community or municipal cannery in the true sense of the word unless it is owned and controlled by several individuals representing the community or municipality. A fund of \$200 for the installation of a plant of average size could be satisfactorily raised by selling forty shares of stock at \$5 a share, and generally speaking forty homes would include the entire community.

RECEIPTS WILL COVER EXPENSE

The operating expenses of the plant will be covered by the receipts from the canned products if a capable manager is hired, and the boys and girls of the community assist in the work, either volunteering for the service one or more days a week, or working for a small wage.

The expenses will include the salary of a manager unless he is already receiving a salary from the school board or other source; the wages of boys and girls, the sugar, sirups, and brines used in the process; and the containers. It is suggested that where the products are canned for home use a fixed charge be made against each can to cover the expense of its preparation.

HOW MERCHANTS CAN HELP

Local merchants can do much to help the enterprise by agreeing to buy the surplus product at a reasonable price, if satisfactory, instead of shipping in canned goods from other states.

The wages of each boy and girl should be determined by setting a fixed rate for each can of vegetables brought in or prepared for the container. In case the superintendent is employed especially for the canning work and not paid by the community as a whole, his salary could be prorated and charged against the products also.

Efficient supervision and management are more important than expensive equipment. It would be poor business judgment to consider a plant without first having in mind an efficient manager for it. The success of

even a small cannery depends in a large measure on this factor.

QUALIFICATIONS FOR MANAGER

The manager not only should be scientifically trained but should also be acquainted with the fruit and garden conditions in the community. As a rule, the proper person for this responsibility is the successful agricultural teacher, who is paid by the school board for the full twelve months of the year, and looks after the cannery as a part of his vacation work, the rest of his time being devoted to gardening and general agricultural work. Perhaps the busiest plants would be kept running only a few days out of each week during the canning season.

The duties of the manager are to locate the materials for canning, to see that they are brought in to the plant at the proper maturity and in sufficient quantities, to direct the work of properly preparing the fruits and vegetables for the jars and cans, and to see that sterilization and sealing is properly done. If there is a failure in any of these particulars, both time and products are worse than wasted. A poor product will create a prejudice against canned foods of this kind.

BOYS WILL COLLECT PRODUCTS

In most cases the boy scouts or the garden club boys may collect the products from the different gardens or orchards and see that they are all delivered to the cannery at the proper time. Either automobiles or horse drawn vehicles may be used. Each boy should be assigned a certain route which he should make each day during the time the cannery is running.

As the boys should look after the collection of the products, so should the girls look after the work of preparing them for the jars and cans. The only reason that commercial canning factories are able to produce a finished product cheaper than can the average farmer is because practically all their work is done by machinery. The corn, for example, is husked, cut off the cob, and put into the jars by machinery. The peas are hulled by machinery and all the labeling as well as the sealing of the cans is done by machinery.

USE VOLUNTEER ASSISTANCE

A small plant cannot afford to invest very much in equipment, hence it should try to make use of inexpensive or volunteer help. When properly supervised, most of the work for a small cannery could be done by boys and girls. Young people like to work together, and the average girl can snap as many beans, hull as many peas, husk and silk as much corn, core as many apples, and stem as many cherries, as can the average housewife.

Fruit and vegetables that may be handled successfully in such canneries are blackberries, huckleberries, apples, cherries, peaches, apricots, pears, plums, strawberries, asparagus, lima beans, snap beans, corn, beet top and other greens, pumpkins, rhubarb, squash, sweet potatoes, and tomatoes.

JARS INSTEAD OF CANS

Unless the canned products are to be handled considerably, jars and not cans should be used. With cans at the present price, they are too expensive. Jars can be used for several years. Such products as rhubarb, pumpkin, and some of the sourer berries should not be preserved in cans unless the enameled or lacquered lined cans are used.

Whether the products are to be canned for market or home use in the community, standard sized cans and jars should be used. In cans these sizes are numbers 2, 3, and 10; in jars, half pint, pint, quart, and two quart. Any jars that may be on hand, regardless of size, may be used, however. As a

rule, vegetables and meats should be preserved in small containers. Fruits keep better than vegetables after the containers are once opened, and for this reason can be handled more successfully in quart or two quart jars than can vegetables or meats.

LABELS FOR MARKETING

When the canned products are to be used for market purposes, labels should be had. Special labels with such printed matter as is desired by the managers of the plant and such as is required by the pure food law, may be had very reasonably. Before labels are printed, a sample copy should be submitted to the bureau of chemistry, Washington, D. C., to make sure the requirements of the law are met. This is necessary, of course, only when the canned products are marketed.

These plants are not being recommended as commercial propositions or as big dividend-paying organizations, although a small cannery, when managed properly, can be made somewhat profitable. They are recommended, however, as an economic means of utilizing a large supply of valuable food which would otherwise be wasted.

Further information is obtainable from the extension division of the agricultural college.

TO PROCURE ENOUGH LIVE STOCK TO CONSUME FEED

Committee of Defense Council Makes Plans for Thorough Utilization of Products Raised

To procure enough live stock to consume the surplus feed that will be raised in the big agricultural campaign inaugurated by the Kansas council of defense in coöperation with the farmers—this is the plan of the live stock committee appointed by the parent body.

Products—such as straw and corn and kafir stalks—often burned or otherwise wasted will be available for feed and should be used, the committee points out. It is possible to winter cattle on wheat straw—of which there will be an abundance in Kansas—with the addition of a little cottonseed cake. The committee is making plans for obtaining enough cattle so that there will be no waste of possible feed products in this war year.

An increase in hog production is also favored by the committee. This is possible through the lending of money to boys or others for the purchase of brood sows. The sum may be repaid from the sale of the first pig crop.

Competent farm hands should be kept on the farms so far as possible. If they enlist in the army, they should be detailed back to the farm, according to a resolution adopted by the live stock committee.

The resolution points out that "Kansas and other agricultural states are short of experienced farm labor and inexperienced labor is almost worthless to the farmer." With a decreased supply of labor, the resolution goes on to state, it is useless to expect increased production. The first crop of alfalfa, it is stated, will be ready to cut in from two to three weeks, and a heavy increase in the labor supply will be necessary if it is to be cared for properly.

Another resolution urges that the use of corn and other cereals in the manufacture of intoxicating liquors be discontinued throughout the war.

BREWER AND GIBBONS WILL HEAD STAFF OF COLLEGIAN

Annual Election of Editor and Manager of Student Paper Is Held

Bruce B. Brewer of Manhattan will be editor, and George C. Gibbons of Muskingum, Ohio, will be manager, of the Kansas State Collegian, the student newspaper, for the coming year. They were elected at a meeting of the board of directors.

Mr. Brewer is now the editor, having been recently chosen to serve out the unexpired term of office of A. W. Boyer, who resigned. Mr. Gibbons is the present advertising manager of the paper.

NOW IT'S WAR ON ANTS

BUT PREVENTION IS RECOMMENDED RATHER THAN CURE

If Pests Have Already Invaded the Home Several Methods of Extermination May Be Tried—Timely Advice by George A. Dean

Prevention is better than cure! To avoid a siege of house ants keep the kitchen and pantry clean and refrain from sweeping crumbs into the back yard, advises George A. Dean, professor of entomology in the Kansas State Agricultural college.

Ants are attracted by the presence of grains of sugar and crumbs of bread or cake on the floor or shelves, pointed out Professor Dean. If the insects become too numerous to eradicate in any other way the best, and many times only effective method, is to find and destroy the nest.

While there are three or four species of ants that occasionally get into the houses, the little red ants and the little black ants are the most common and troublesome. The little red ant is the true house species, making its nest behind the plaster, wainscoting or baseboard and mantels, beneath flooring and, in fact, wherever there are cavities with external openings. The little black ant is not strictly a house species, although frequently found indoors and becoming at times as troublesome as the red ant. Its colonies are usually located under walks and stones, in the yard and under steps and low platforms.

LOOK FOR NEST OF ANTS

The red house ant is usually difficult to eradicate, but, if the nest is found, two or three ounces of carbon bisulphide can be injected into it, which will kill the queen and workers present and the rest will then die out in time. The nest of the little black ant is more easily located by following the workers as they leave the house and go into the yard. The nest can be treated with hot water or by injecting carbon bisulphide, which may be applied through one or two holes in the top of the nest. These holes after treatment should be covered over with earth.

Whenever the nests cannot be located, there is no other remedy than the temporary expedient of destroying the insects in the house. One of the best means of effecting this is to attract them to porous sponges moistened with sweetened water and placed where the pests are most numerous. These sponges may be collected several times daily and the ants swarming in them destroyed by immersion in hot water.

ANTS ARE FOND OF BACON

Another attractive food is a piece of bacon—bacon rind or bone with little adhering scraps of meat and blood. When this is covered with ants it should be burned. The paper in which meat is sent from the butcher, baited with some meat scrapings and crushed into a loose wad attracts the ants. A steady campaign for a few days causes great destruction of the colonies, and may even completely eradicate them.

A more efficient remedy, where it can be safely used, is a syrup poisoned with arsenate of soda. The ants will collect this poison syrup and convey it to their nest, so that not only those which collect the syrup are ultimately killed, but the inmates of the nests succumb. Use one pound of sugar dissolved in a quart of water, to which should be added 125 grains of arsenate of soda. The mixture should be boiled and strained and on cooling used with sponges, as already described. The addition of a small amount of honey is said to give additional attractiveness. Naturally the greatest precautions should be taken in preparing this syrup and in safeguarding it afterwards to prevent its poisoning human beings or domestic pets.

PLANS ARE COMPLETED FOR BIG PAGEANT AT McPHERSON

Walter Burr, Director of Rural Service Department, Is in Charge

Plans for staging a pageant at the celebration of the unveiling of the Major James Birdseye McPherson

monument at McPherson, July 4, are now completed. Walter Burr, director of the rural service department, division of extension, Kansas State Agricultural college, is in charge of all arrangements.

The pageant, which will last two hours, will begin with historical episodes depicting epochs in chronological order from the time of Coronado to the development of agricultural education in Kansas.

"We plan to train and use the people of McPherson county outside of the city of McPherson for these episodes," said Mr. Burr. "The whole of the county is behind the patriotic event which is the culmination of several years of plans and expectations."

More than 1,200 persons are expected to participate in the pageant presentation. Each section of the county will perform a part. The rehearsals will be made in each community under a director sent out by Mr. Burr. On the evening of July 4 all groups will assemble for the presentation which will be staged in a large tent seating 6,000 persons.

The celebration will begin in the morning. The marine band, several companies of national guards, the G. A. R., and 250 members of the Lindsborg chorus are expected to assist the local talent. Governor Arthur Capper and his staff will be present.

PRESERVE EGGS IN MAY FOR USE NEXT WINTER

Water Glass Is Second Only to Cold Storage in Effectiveness, Says Poultry Specialist

Eggs should be preserved in May and June for use next winter when they are scarce and high in price, in the opinion of F. E. Fox, assistant in poultry husbandry in the Kansas State Agricultural college.

There are many methods of preserving eggs for winter use such as packing in bran or salt, or covering in lime water, but water glass ranks second only to cold storage, points out Mr. Fox.

Water glass is known chemically as sodium silicate and can be obtained at any drug store. Fresh, thoroughly cooled eggs should be placed in a stone jar or any vessel provided it is not glass, and covered with a 10 per cent solution of water glass.

The containing vessel should be stored in a cool place, preferably an odorless cellar having a temperature of from 33 to 45 degrees. The vessel should be covered with a board to exclude dirt and trash. The only attention required is that water be added occasionally as evaporation causes the solution to become thick and jelly like.

Eggs preserved in this manner will be good for use next winter. The preserved eggs do not absorb any undesirable flavors from the water and are excellent for baking or boiling, but are not so good for frying, as the albumen or white of the egg will absorb water from the solution and become watery. If the eggs are to be boiled the shell should be pierced with a needle to prevent cracking.

Eggs preserved in water glass should not be marketed, according to Mr. Fox. The eggs will not have the bloom and fresh appearance of newly laid eggs but will be smooth and slick.

It has been found that summer eggs do not keep as well as those laid before the hot days. It will make little difference in the keeping of the eggs whether they are fertile or not. Eggs will not spoil if air and heat are excluded.

Two or three hundred vacant lots in Beloit have been donated by the owners for the summer to be used in reinforcing the food drive that is now being made by the Kansas state council of defense. The commercial clubs of the town have employed the teacher of agriculture in the high school for the summer, to supervise the work of planting these lots to gardens. School boys will do the work. Mrs. Carrie McClintic, a Kansas State Agricultural college graduate, has been appointed overseer of the work of canning the vegetables and fruits.

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WHEN CORN IS YOUNG

THAT IS TIME FOR CAREFUL, THOROUGH CULTIVATION

Agronomist Tells of Methods Found Best for Keeping Crop in First-class Condition—Three to Six Times Enough

Cultivation is of greatest importance in the early growth of corn, according to L. E. Call, professor of agronomy in the Kansas State Agricultural college.

The harrow may often be used to advantage after planting, on both listed and surface planted corn, but when the shoots of the surface planted corn are just out of the ground, it is not best to harrow again until the corn is two or three inches high. Weeds that are just germinating or that have not yet obtained a good root hold on the soil are easily killed by light cultivation with the harrow or the weeder.

LISTER CULTIVATOR GOOD

The lister cultivator is admirably adapted for cultivating listed corn. Ordinarily it is used twice, once with the disks set to throw the soil away from the corn, and once with the disks set to throw it towards the corn. It is important that the cultivator be set to kill or cover all the weeds in the row. Those which escape the early cultivation cannot, as a rule, be destroyed later.

The shovel cultivator is used in cultivating corn after it becomes too high to harrow, or in the case of listed corn, after the ridges have been worked down with the lister cultivator. The number of cultivations depends on the type of soil, on the distribution of the rainfall, and on whether the weeds are unusually numerous.

TOO FREQUENT STIRRING HARMFUL

Experiments show that from three to six cultivations are as many as are practical. Too frequent stirring of the ground, especially when it is dry, may do harm, in that the dusty condition of the soil is effective in keeping rain water from entering the soil readily. The ideal condition in which to maintain the soil is to have a mulch two or three inches deep, composed of small lumps mixed with small granules and reasonably free from dust.

On the average, it is best to cultivate two or three inches deep. While the plants are small and before the roots occupy the space between the rows, the ground may be stirred deeply with good results. After the roots have permeated all the soil, it should not be cultivated to a depth of more than three inches.

An extra cultivation or two with a one-horse cultivator may be given to advantage if rains have heavily crested the soil after the corn has been "laid by" and if a crop of weeds is starting. When the ground is in good tilth and reasonably free from weeds, nothing is gained by cultivating after the ordinary "laying by" time. Late cultivations should always be shallow to avoid damaging the corn crops.

KANSAS COUNCIL OF DEFENSE EMULATES CAESAR'S DIVISION

Arranges State in Sections for Growing Sorghums as Big War Crop

Kansas, like ancient Gaul, is divided into three parts. But it is the Kansas council of defense, not Julius Caesar, that has made the division. The purpose is to promote the growing of sorghums as a big war crop.

The eastern half of Kansas, approximately speaking, forms one section. The western line of this section starts near the western edge of Jewell county, and runs in a southwesterly direction till it ends in the southwest corner of Comanche county. In this region blackhull or red kafir is the best grain sorghum, except on thin upland soils,

where pink kafir is most successful. The desirable forage sorghums are blackhull kafir and amber, orange, and sumac sorghums—varieties sometimes known as cane.

The second section of the state is about three counties broad, ending on the west with a line drawn from about the middle of Norton county down to the southwest corner of Stevens county. The grain sorghums best adapted there are dwarf milo, feterita, dwarf blackhull kafir, and an early adapted strain of blackhull kafir. All kinds of kafir and amber sorghums may be grown for forage.

In the third section, comprising the rest of the state, dwarf milo and feterita are the grain sorghums to plant, while all kinds of kafir and the amber sorghum are useful for forage. In this region or along the western edge of the second region, if dwarf milo, feterita, or an early variety of kafir is not obtainable, early adapted varieties of corn are preferable as a grain crop to blackhull kafir or other late maturing grain sorghums.

MANY FACTORS SETTLE WAY TO GROW SORGHUMS

Listing Is Used in Western Kansas, Surface Planting in Eastern Part of State

The best method of growing sorghums differs with the locality, kind of soil, and purpose for which the crop is grown, asserts C. C. Cunningham, assistant professor of cooperative experiments in the Kansas State Agricultural college.

Sorghums grown in rows for grain, forage, or silage are handled in the same way as corn. There are two general methods of growing sorghums in rows—listing and surface planting. Listing is the best method with light rainfall and on medium and light types of soil. This method is used exclusively in the western part of the state. Listing is cheaper, as the land is not plowed before planting. Listed rows also offer protection in dry weather.

In eastern Kansas there is danger of listed sorghums being drowned out by heavy rains. Surface planting is better than listing on wet soils and in localities where precipitation is heavy. In parts of state where the precipitation is more than 30 inches, sorghums will be grown to best advantage by surface planting. The seed will germinate better and will make a more rapid growth. Plowing puts the soil in better condition, and assists somewhat in plant growth.

The preparation of land for sorghums varies with the soil, the preceding crop, the precipitation, the seasonal conditions, and the method of planting employed.

MOTHER-DAUGHTER CANNING CLUBS ARE PROVING POPULAR

New Organization at Riley with More Than 130 Members

A mother-daughter canning club has been organized at Riley under the leadership of Otis E. Hall, state leader of boys' and girls' club work, division of extension, Kansas State Agricultural college.

The three church organizations of Riley have united in organizing this club. Mrs. Lucy Potorf, '98, was elected president; Mrs. Ella Walters, vice-president; and Mrs. Alvin Gates, secretary.

More than 130 members are already enrolled in this club. The club is made up of seniors and juniors. Before a girl of 18 or older may enroll she must have a junior partner—either a daughter or son, or a young friend. The purpose of this club is to teach and encourage home canning and the saving of those fruits and vegetables which are generally plentiful in summer but scarce in winter.

TO DRAIN GUMBO SOILS

SURFACE METHOD IS ESSENTIAL, SAYS H. B. WALKER

Correct Cultivation Will Be of Much Help—Land Should Be Farmed in Direction of Greatest Natural Slope

The black alluvial soils in the river valleys of Kansas are generally conceded to be the most fertile in the state, yet such land often is unproductive because of poor drainage. That owners of flat, heavy land should remember that the first step in draining these black, waxy, gumbo soils is to secure adequate surface drainage, is the suggestion of H. B. Walker, drainage and irrigation engineer.

Gumbo soils are finely divided and more or less compact, consequently they offer considerable resistance to the free percolation of water downward, according to Professor Walker. Where no provision is made for the removal of storm water by adequate open ditches, crop losses are of frequent occurrence.

Tile drainage, although beneficial, is not adequate as a complete drainage outlet for both surface and soil water, and it is questionable if underdrainage should be attempted at all unless good surface drainage has been previously provided.

While a good system of surface drains well located and properly graded is essential as the initial step in reclaiming these heavy soils, correct methods of cultivation will aid materially in securing more effective drainage. Such land should be farmed in the direction of the greatest natural slope by plowing with head lands and dead furrows. In some localities this method is known as bedding or ridging.

The bedding need not be pronounced but should be just sufficient to afford a natural drainage tendency laterally from the head lands to the dead furrows. The dead furrows, in turn, must be used as lateral surface ditches, and these must be kept open at their lower ends into larger surface ditches leading into some natural depression or stream. If the dead furrows are not kept open, all of the advantages of the bedding system are lost.

The practice of plowing flat or level land around the field is not satisfactory where gumbo soils are encountered, since this method of cultivation does not afford any simple system of surface drainage.

LEAVENWORTH FARM BUREAU PROMOTES BETTER DRAINAGE

Complete Plans Drawn by Engineer for Systems on 30 Farms

The farm bureau of Leavenworth county has been active in promoting better drainage on the farms of its members. Since last fall complete plans have been made for drainage systems on 30 farms. These have been prepared by H. B. Walker, irrigation and drainage engineer, the division of extension, Kansas State Agricultural college.

FOWLS HAVE NO RIGHT TO SIT STILL AND DO NOTHING

Eliminate Expense of Broody Hens, Advises Poultry Specialist

Eliminate the expense of broody hens. Even the fowls have no right to sit and do nothing at a time when the country is facing so great a food shortage, according to Ross M. Sherwood, acting head of the poultry department in the agricultural college.

"The average hen lays four or five eggs a week, worth 12 to 15 cents at the present price of eggs," said Mr. Sherwood. "Hens should be 'broken up' as soon as they become broody. If

possible do not let them sit over night, for a day saved in shutting them up may save two days of their laying period.

"Broody hens should be placed in airy coops with slat bottoms and kept off the ground. Too frequently an ordinary box or tub is turned over them, and as a result they are almost as content to sit on the ground as they were on the nest.

"It is a mistake to starve a broody hen. She should be well fed at this time so that she will be ready to lay when turned out. Avoid fattening the hen while breaking her up. Give a limited amount of grains and a liberal supply of milk and table scraps. Care should be taken to turn the hens out as soon as they are broken up."

COLLEGE HAS NUCLEUS OF MODEL GUERNSEY HERD

Institution Now Owns Some of Best Stock Yet Brought to Kansas—Langworthy Benefactor Heads Herd

The Kansas State Agricultural college has the nucleus of a model herd of Guernsey cattle—a bull and four heifers.

The bull—Langworthy Benefactor, a yearling—is one of the best bred Guernseys in the world, having been purchased recently from the Langworthy farms in North Easton, Mass. The first seven dams averaged 810 pounds of butter a year—the first 15 averaged 790 pounds.

Two of the heifers are from the Island of Guernsey, and two from England. This small group of cattle represent the best Guernsey blood that has been brought into the state.

CARE OF SUCKLING LAMBS IS OF PRIME IMPORTANCE

It May Determine Success or Failure of Sheep on Farm—Timely Suggestions by A. M. Paterson

Care given the suckling lambs may determine the success or failure of sheep on the farm, according to A. M. Paterson, instructor in animal husbandry in the Kansas State Agricultural college.

New born lambs should nurse soon after birth, for when lambs get milk in their stomachs they usually give no more trouble, pointed out Mr. Paterson. Suckling lambs should have access to grain at all times. This is best provided by means of a creep. Plenty of clean, fresh water should always be provided, and the lambs should be allowed to have green grass if available.

Lambs should be weaned at from four to five months of age depending, somewhat, on the condition of the ewes and the size of the lambs. Where they are large and growthy, and the ewes thin, the lambs may be weaned earlier in order that the ewes may be put in better condition before breeding. Where the lambs are small and the ewes in good condition, however, they may be allowed to run together longer. The lambs should be well fed at weaning time to avoid setbacks.

Watch the udders of the ewes to see that they do not cake. If they do, the lambs will be prevented from sucking. Particular attention must be given to prevent the udder from spoiling at weaning time. To stop the flow of milk the ewe should be put on a dry ration for two days.

Six canning clubs were organized in April by Mrs. J. M. Timmons, county leader for Leavenworth county in the club work of the Kansas State Agricultural college and the United States department of agriculture, cooperating. Plans are being made to give canning demonstrations in many of the rural school districts of the county that have no club organization for the promotion of this work.

MEAT CLUBS WILL PAY

ARE WORTH WHILE FOR KANSAS RURAL COMMUNITIES

Plan Will Eliminate Middle Man's Charges and Railway Transportation—Farmer's Time Will Also Be Saved

Meat clubs in rural communities in Kansas would make possible a constant supply of fresh, wholesome meat for the farmers, in the opinion of A. M. Paterson, instructor in animal husbandry in the Kansas State Agricultural college.

"Elimination of the middle man and railroad transportation gives the farmer a higher quality of meat at lower cost," said Mr. Paterson. "The time and expense of going to the city after fresh meat is also done away with."

HOW LARGE A CLUB?

"Organizations of this kind consist of as many families as the community justifies. The number depends on the distance between families and the number of persons in the family. When companies are formed, constitutions and by laws should be drawn up. The clubs should be so organized that each family should get one of the several cuts of a carcass. It should be understood that if at one time a member gets a cut of high value, the next time he will get a cut of lower value. These clubs should be formed only to supply fresh meat as each family should kill and cure enough pork to last them throughout the year.

"It is well to have the beeves as near the same weight as possible. In every case it is necessary to keep permanent records of weights and number of cuts distributed to each member. One or two large families can handle a lamb. When mutton is used, therefore, a large club can handle three or four lambs at one time. Pelts and hides must be sold and proceeds either distributed to club members or given to the person furnishing the animal.

TO KEEP MEAT PROPERLY

"Animals should be killed in the evening and the carcass split and allowed to cool over night. As soon as the carcass is cool it should be proportioned and divided. Meat should be placed in a dry, well ventilated place, because it will keep longer at comparatively high temperature where the circulation of dry air is good than at a lower temperature where the circulation is poor and the air damp.

"In case there is danger that some of the carcass will spoil it may be corned. In preparing corned beef, to 100 pounds of meat use eight pounds of salt. Sprinkle a layer of salt in the barrel, then a layer of meat. This is done until all of the meat is in the barrel. Be sure to have enough salt to cover the top of the meat. Let it stand over night, then add to each 100 pounds of meat, four pounds of sugar, two ounces of baking soda, and four ounces of saltpeter, dissolved in one gallon of tepid water. Have enough of the solution to cover the meat. Weight the meat down. The meat is taken out of the cure as used."

DAIRYMEN WILL DISCUSS PROBLEMS AT MAY MEETING

Mohler, Bigger, Fairchild, and Reed Are Among Speakers May 19

Successful dairying with the present high price of feed and scarcity of labor will be discussed at an auxiliary meeting of the State Dairy association at the state house in Topeka, Saturday, May 19, according to announcement made by J. B. Fitch, secretary.

Among the speakers will be J. C. Mohler, secretary of the state board of agriculture; J. W. Bigger, Topeka; Frank Fairchild, Tonganoxie; and O. E. Reed, professor of dairy husbandry in the agricultural college.

THE KANSAS INDUSTRIALIST

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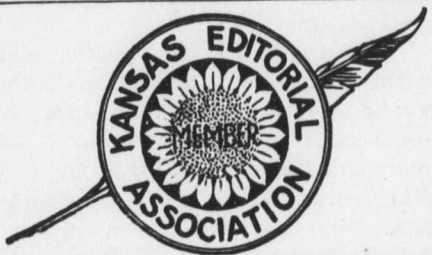
H. J. WATERS, PRESIDENT.....Editor-in-Chief
N. A. CRAWFORD.....Managing Editor
J. D. WALTERS.....Local Editor
ADA RICE, '95, M. S. '12.....Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

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WEDNESDAY, MAY 16, 1917

EVERYONE CAN CONSERVE

In the present world crisis, it is not enough that the farmer shall produce record crops to feed the armies of the United States and her allies. This it is certain that the farmer will do. He is thoroughly patriotic, and he recognizes the present need. Farmers throughout the nation are coöperating in employing the best methods, planting the surest crops, using to the best advantage every acre of land.

But all the responsibility must not be placed on the farmer. He is doing his part; others must do theirs. Upon every citizen of the nation—every man, woman, and child in country or town or city—rests the responsibility of conserving the food that the farmer produces.

Heavy production will mean nothing if people waste the surplus that is produced. There must be conservation of food in every possible way. People must be willing to abstain from unnecessary food, to use substitutes for some foods that they are in the habit of eating, to consider real value more than personal taste. Food must be preserved in the best way possible for use in the winter months when there is comparatively little production.

These are simple matters, but highly important ones when it is considered that they may be carried out by millions of people. Not everybody can produce food, but everybody can conserve it.

COUNTY AGENTS AS HELPERS

Kansas has only 17 county agents. It ought to have 105, one for every county, and if it had 210 of the right stamp it would be just twice as well off. Oklahoma has about 60, and they are doing the most important work. Indeed such men, the right kind of men, can give exceptionally valiant service now when it is vital for the best possible influence to be exerted with the farmers personally. Of course there are fools among the county agents, exactly as there are fools in any large number of human beings. The regrettable thing is that the fools who have broken into the county agent ranks in the past have brought upon the work adverse criticism which it is not easy to overcome.

The thing for farmers to remember is just this: Whether you realize it or not this country has a carking big war on its hands, and it won't be over and things cleaned up in a few weeks. It is your duty to fall in line to the best of your ability, right there at home. It is your duty to accept the county agent idea and coöperate fully, because the kicker is going to be left a long way behind, this year; it is your duty to realize that the biggest hour of your life has come, the hour in which—all bunc and boasting aside—the farmers of America are facing a great responsibility. City boys might require a lot of training before they would be very much value on a farm

but if you couldn't get any other help, even city boys might—I say they might—do some of the work, and eventually they might earn their board. Every farm in Kansas ought to have a sign at the gate reading this way:

THE MAN ON THIS FARM KNOWS HIS BUSINESS BUT IS WILLING TO LEARN MORE ABOUT IT. IF YOU KNOW SOMETHING WORTH WHILE COME IN.

It is going to call for more brains than ever to be a good farmer. And the really good farmer is the one who is willing to learn.—Charles Dillon in The Farmers Mail and Breeze.

WHEAT SHORTAGE

More and more good American wheat is going to the bottom of the Atlantic, and even without taking into consideration this destruction, the prospect of the world going somewhat hungry is becoming more serious. The statistical notes on cereals published by the International Institute of Agriculture at Rome report a deficiency in the northern hemisphere of 63,000,000 quintals, and to cover this a possible supply of about 50,000,000 quintals from the southern hemisphere. The institute says:

"We ought to add that this deficiency seems all the more serious when it is remembered that a balance of supply and requirements was only approximately attained by dealing with a remainder of 100,000,000 quintals, the result of the extraordinarily plentiful crop of 1915 and 1915-'16."

Should the war end Russia and Roumania may possibly release enough to avert disaster, but in any case we are banking on right weather conditions and most rigid economy of supplies now in hand, and on substituting corn, other grains, and beans so far as possible. As a rule Americans will not go hungry, but every consideration demands production to the utmost.

Coming closer home, May wheat sold in Chicago on Tuesday at \$3.00 per bushel, and on the same day a wire from Washington stated that there has been abandoned by the farmers of the middle west 12,437,000 acres, or practically one-third of last fall's planting of winter wheat. This leaves still standing 27,653,000 acres, more or less indifferent as to condition, and 7,000,000 acres short of last year's harvest. Numbers of fields will be planted to spring wheat, oats, or other spring crops, and will produce some food. The department of the interior is urging appropriation of \$5,000,000 to bring vacant land under irrigation projects under production this season if possible.—California Cultivator.

THESE ASK WAR PROHIBITION

Among a thousand signers to a memorial addressed to congress asking for nationwide prohibition are the following:

Luther Burbank.
Dr. James Brown Scott, secretary to the Carnegie Endowment for international peace, and an authority on international law.
William J. Bryan.
Raymond Robins, social worker.
Darwin P. Kingsley, president of the New York Life Insurance company.
John Spargo, author and socialist.
Frederick Frelinghuysen, president of the Mutual Benefit Life Insurance company.
Winston Churchill, novelist.
Judge C. C. Kohlsatt, Chicago.
David R. Forgan, president of the National City bank, Chicago.
Dr. Victor C. Vaughan, dean of the medical school, University of Michigan.
Gifford Pinchot, president of the National Conservation association.
Dr. W. J. Mayo, surgeon, Rochester, Minn.
Warren S. Stone, grand chief of the Brotherhood of Locomotive Engineers.
W. J. Harahan, president of the Seaboard Air Line Railway company.
Howard Elliott, president of the New York, New Haven & Hartford railroad.
H. T. Herr, vice-president of the Westinghouse Machine company.
A. B. Farquhar, president of the A. B. Farquhar company, Limited, steel manufacturers.

James Long, president of the American Iron and Steel Manufacturing company.

C. C. Chesney, manager of the General Electric company.

Lieutenant General Nelson A. Miles.
John Wanamaker.

Francis Winslow Poe, president of the F. A. Poe Manufacturing company, Greenville, S. C.

W. R. Rogers, the Keystone Steel company, Warren, Pa.

John F. Fort, ex-governor of New Jersey.

Charles S. Pillsbury, vice-president of the Pillsbury Flour Mills.

Robert Garrett, Robert Garrett & Sons, bankers, Baltimore.

Dr. John M. T. Finney, professor, Johns Hopkins university.

been repaired, and will be kept in running order in the future.

C. E. Wood, '79, of Denver, stopped over a train on Saturday last to visit the college. He had just returned from a three months' prospecting trip to Florida.

The museum has received a carved elk rib, taken from an Indian grave, the gift of R. A. Clark, third-year last fall, of Sitka, Alaska, and from C. A. Campbell, '91, a large pelican, killed near Manhattan.

Mrs. Lizzie Williams Champney, an old time teacher in this college, now widely known for her charming drawings and literary productions, writes of "An Old Stager" in the Easter number of Wide-Awake.

Birds a Farm Asset

C. C. Clute

IF one tenth of all the agricultural products raised annually in the United States were scattered over different sections of the country where most needed, would it help fight the high cost of living? Statistics show that annually there is a loss of between \$800,000,000 and \$900,000,000 in the agricultural products of the United States, all due to the ravages of insects.

This fact was cited recently by a leading Chicago paper, and it was further cited that the loss might be materially lessened were birds protected as they should be. When one of the leading metropolitan newspapers of the land advocates that every available plot of ground be turned into a garden spot and cultivated, and when in the same issue that same paper urges that birds be protected that they might destroy insects, it is surely time for every one to consider what part he is to do in the work, and, insofar as possible, lend a hand in doing his mite. One insect destroyed in the spring means the destruction of hundreds, and in some cases thousands, ere the summer is over.

Government statistics and personal observation show over and over again that the birds are the farmers' best friends, which, in return for their services, ask only protection that they may bring forth more enemies of insects.

Just how is this protection to be given? Happily the time is passed, or nearly so, when farmers think that the birds must be destroyed because of the fruit they eat. In comparison with the amount of good they do, the amount of fruit eaten by birds during the summer is an infinitesimal matter,—a mighty good form of insurance for the farmer.

The best way to get on amicable terms with birds is to build and put up bird houses and see that such are not destroyed by boys or preyed upon by cats. Put up a single bird house this summer if you are a skeptic and watch the wren, or bluebird, or purple martin, as it feeds its young, taking note of the kind of feed it uses and the number of trips made per hour. Keep a record of this for a few hours, estimate the good done in a day, in a week, in a month, and in a nesting season, and you will be wiser the following year.

Capt. Robert Dollar, president of the Dollar Steamship lines.

Dr. John H. Finley, state commissioner of education of New York.

Dr. Ludwig Hektoen, University of Chicago.

Howard A. Fitch, general manager of the Kansas City Structural Steel company.

Bion-J. Arnold, electrical engineer, Chicago.

—Capper's Weekly.

A QUARTER CENTURY AGO

Items from The Industrialist of May 14, 1892

Commencement invitations will be issued next week.

A long-needed cinder walk is being laid to the iron shop.

A host of visitors whose names were not learned have been at the college this week.

Miss Mamie Houghton, '91, has finished her term of teaching at Cleburne, and will spend the summer at home.

Assistant Chemist Breese has rented the new Kellerman cottage, and will occupy it as soon as the weather permits moving.

A defective flue in Professor Olin's house furnished a small blaze and slight damage, but considerable excitement on Tuesday.

The old fire extinguisher, after several years useless existence, has

Captain J. M. Lee, Ninth United States infantry, visits the college this morning to inspect the military department in the name of inspector general. A landslide on the Rock Island railway between McFarland and Manhattan prevented the inspection yesterday.

The last division of the fourth-year class entertained the chapel audience yesterday afternoon with orations as follows: F. C. Sears, "The Eight-hour Question;" Miss May Secrest, "Bread, Meat, and Potatoes;" Miss Alice Vail, "Life the Test of Learning;" Miss Ora Wells, "Castles in Spain;" D. F. Wickman, "Discontent and Conservatism in Our National Life;" C. E. Yoe-man, "Why We Pay Tribute;" W. P. Tucker and G. W. Wildin, discussion, "The Relative Importance of Statesmanship and Invention in our National Development."

A most delightful faculty party gathered on Saturday evening in the parlors of Mr. and Mrs. Davies by invitation of Mrs. Kedzie, who makes her home with them. Each guest was decorated with some device indicating the title of a book from which he stood ready on demand of proper authority to present a quotation. These wonderful devices brought many an ingenious guess that filled the rooms with cheer until refreshments for the inner man supplied all wants, and equipped the guests for braving the dismal rain that hurried the departure.

AMERICAN DESTINY

Richard Hovey

To what new fates, my country, far
And unforeseen of foe or friend,
Beneath what unexpected star,
Compelled to what unchosen end?

Across the sea that knows no beach
The Admiral of the Nations guides
Thy blind, obedient keels to reach
The harbor where thy future rides!

The guns that spoke at Lexington
Knew not that God was planning then
The trumpet word of Jefferson
To bugle forth the rights of men.

To them that wept and cursed Bull Run,
What was it but despair and shame?
Who saw behind the cloud the sun?
Who knew that God was in the flame?

Had not defeat upon defeat,
Disaster on disaster come,
The slave's emancipated feet
Had never marched behind the drum.

There is a Hand that bends our deeds
To mightier issues than we planned,
Each sun that triumphs, each that bleeds,
My country, serves its dark command.

I do not know beneath what sky,
Nor on what seas shall be thy fate;
I only know it shall be high,
I only know it shall be great.

SUNFLOWERS

Who put the put in potato?

You're doing well if you save your
breath nowadays.

There seems to be a good opening
in Russia for some fellow with a lot
of executive ability.

We trust that it isn't too early to
warn against putting shrapnel in
Fourth of July firecrackers.

If the United States army can just
get a few privates now, it will be in
pretty fair shape before long.

We are still betting that Miss Jean-
ette Rankin will open up and say
something out loud yet. Few con-
gressmen (or women either) were born
to think unheard.

It is to be hoped that that American
dentist whom the Kaiser sent for will
handle the old autocrat with the same
kindness that the ordinary dentist uses
in treating an exposed nerve.

Old man Smith, a highly respected
citizen of our little community, who
shot and killed a pair of ukelele
players from his bedroom window last
Friday night, has been discharged
from custody and granted a pension
for meritorious service.

DAIRY EFFICIENCY

The dairy farmer must watch his
cows as never before. There may pos-
sibly have been excuses for cows that
were not yielding a maximum profit
every day in the past, but this year
there is absolutely no excuse for such
an animal. Every individual must be
held to the limit of production if we
are to get the most, if we are to go the
farthest, and if we are to do the best
with our herds.

The farmer cannot afford to sell his
feed at unprofitable prices which is
merely another way of giving it to un-
profitable cattle, but if he will see to
it that his cattle are all thoroughly
productive and are yielding a hand-
some return for every particle of feed
they eat, then he can rest assured he
will go far in the efficiency of his farm
work.

This implies that nothing but the
right kind of cows be kept on the farm.
In the majority of cases it is inadvis-
able to look to any market save the
dairy cow when seeking to dispose of
the products of the field. She can take
the crops that are raised, cultivated,
and harvested on a large scale by
labor saving machinery and return for
them a maximum of food for the human
family.—Holstein-Friesian World.

AMONG THE ALUMNI

O. E. Noble, '97, has been appointed under the new law as county engineer of Riley county.

C. G. Elling, '04, district agricultural agent in southeast Kansas, was in Manhattan Friday.

C. I. Felps, '12, formerly assistant in highway engineering in the division of extension, visited in Manhattan recently.

A. G. Vinson, '15, is instructor in the department of agriculture in the Northwestern State Normal school at Alva, Okla.

Miss Reah Lynch, '16, of St. Louis, Mo., has gone to Washington, D. C., to take a three months' training course for Red Cross work.

Miss Florence Justin, '16, writes that she is enjoying her stay in Sioux City very much. She expects to return for commencement in June.

M. E. Hartzler, '14, has resigned his position on the interstate commerce commission and returned to his home in Manhattan on account of ill health.

R. W. Rader, '95, is credit manager for the Theodore Poehler Mercantile company, of Topeka. He expects to attend commencement exercises this year.

Miss Florence Carvin, '13, has secured a leave of absence from her work in Wichita high school for the purpose of taking a term of graduate work here.

Elliott Ranney, '16, who has been teaching the last year in the Wichita high school, writes that he has just received an appointment as paymaster in the navy.

D. P. Ricord, '16, who is at training camp at Fort Riley, spent Sunday in Manhattan. Mr. Ricord gave up his trade journal work in Minneapolis, Minn., to attend the camp.

Doddridge C. Tate, '16, has been transferred to the engineering department of the Western Electric company at Chicago. He is living at 5042 West Twenty-fourth street, Cicero, Ill.

Miss Edna Barber, '15, who has been teaching in Malad City, Idaho, for the past year, has accepted a position for the summer in a hospital in Chicago. She expects to visit college en route to her new work.

Mrs. Josephine (Wilder) McCollough, '98, who is chairman of the conservation committee of the Kansas society, Daughters of the American Revolution, has a timely letter in the Sunday Capital concerning national service.

H. H. Amos, '16, assistant to Prof. H. H. King, received severe injuries Monday when a bottle of flashlight powder he was carrying exploded. Practically all his left hand was blown off, and he was cut about the head and face.

Dr. H. R. Groome, '07, has removed from Jewell City, Kan., to Twin Falls, Idaho, where he will continue the practice of his profession. He was well known in Jewell City, being prominent in the Methodist church and the Masonic lodge.

A. W. Bellomy, '14, assistant for two years in the zoölogy department, now fellow in zoölogy in the University of Chicago, and L. M. Peairs, '05, formerly instructor in entomology in the college, now fellow in physics in the University of Chicago, have been elected to the honorary graduate scientific fraternity, Sigma Psi.

J. U. Higinbotham, '86, who is with the Detroit Lubricator company, in sending his dues writes, "This may not pay me up to date. If it does not, please advise me, as in these days of Red Cross memberships, Belgian baby bonds, Preparedness leagues, and other slow leaks in my bank account, I am liable to overlook the organization that is dearer to me than any other, the Alumni association of the Kansas State Agricultural college."

R. A. Oakley, '03, and C. P. Hartley, '92, are members of a committee of

eight on Seed Stocks appointed recently by the secretary of agriculture to secure full information in regard to the available supplies of seed for staple food crops and to devise methods of meeting shortage in particular regions. The committee will inventory and ascertain the amount and price of seeds available and will consider questions relating to the growing and distribution of seed stocks. Among the crops with which the committee will work are corn, wheat, oats, barley, rye, potatoes, beans, peas, flax, soy beans, and the sorghums.

BIRTHS

Born, to Mr. W. T. Parry, '12, and Mrs. Fay (Reid) Parry, '14, St. Cloud, Minn., on May 12, a daughter, Esther Laura.

FLORIDA ALUMNI

The Kansas State Agricultural college folks in Florida are "doing their bit." In the recent Better Baby week program in Gainesville Mrs. Charles Hunter, '16, gave a talk on "School Lunches;" Mrs. Oley Weaver read a paper on "Feeding Young Children;" and Mrs. J. M. Scott, '04, was one of the hostesses. Oley Weaver and J. M. Scott are working with the state food commission to increase the acreage of foodstuffs in the state.

SIoux CITY ALUMNI ORGANIZE

Dr. and Mrs. T. P. Haslam entertained the Kansas State Agricultural college alumni of Sioux City, Iowa, at dinner on Friday evening, May 4. Later in the evening an alumni organization was formed, Mrs. E. S. Taft being elected president. Alumni living in or near Sioux City are urged to join. Those present were Dr. T. P. Haslam, '08, and Mrs. Edith (Justin) Haslam, '08; E. S. Taft, '08, and Mrs. Elsie (Kratsinger) Taft, '08; Miss Anna Sanders, '14; Miss Florence Justin, '16; J. W. Lumb, '10; V. E. Bundy.

FROM A FORMER PROFESSOR

Mrs. Nellie (Kedzie) Jones, '76, of Auburndale, Wis., has enrolled as a paid up member of the Alumni association. In a recent letter she writes as follows:

"We had a good time at the Kansas Agricultural college meeting when President Waters was with us. I like him very much.

"I hold telephone conversation about every day with Gertrude Coburn Jessup, '91, Madeline and Paul Milner, '91, the Mayos, D. G. Robertson, '86, the Nichols folks, and several other friends of past happy days.

"We have enjoyed greatly being in Chicago this winter."

DEATHS

SEWARD NATHAN PECK

Seward Nathan Peck, '87, aged 57 years, died of heart failure Tuesday, April 3, after an illness of only a few hours.

Mr. Peck was born August 18, 1859, in Clifton Park, Saratoga county, New York. In 1869 the family removed to Keokuk, Iowa, and in 1872 to Junction City, Kan., where he attended the public schools. He graduated from the Kansas State Agricultural college in 1887, and the same year entered the employ of the Santa Fe railroad at Topeka as a draftsman. In 1904 he moved to Chicago, where he was still in the employ of the Santa Fe system.

On April 9, 1893, he was married to Miss Lena McGuire of Topeka, who with four children survive him. He is survived also by two brothers and a sister.

Mr. Peck was prominent in activities in the Congregational church and the Masonic lodge.

Miss Stella Mather, home economics lecturer, and Miss Minnie Sequist, specialist in home economics, division of extension, Kansas State Agricultural college, have gone to Jewell county to conduct two one-week home economics schools. Miss Sequist is giving the work in sewing and Miss Mather that in cooking.

MITES CUT EGG SUPPLY

LICE ALSO REDUCE PRODUCTION. POINTS OUT POULTRYMAN

Latter May Be Easily Poisoned, Says F. E. Fox—Other Insect Is Controlled Chiefly by Sanitary Measures

That lice and mites materially cut down egg production, is the belief of F. E. Fox, assistant in poultry husbandry.

"Lice and mites by feeding upon laying hens cause a reduction in egg production," said Mr. Fox. "The lice live continuously upon the fowl, eating the tissues and causing much annoyance by scratching and irritating the bird. Mites suck the blood of the victim and thus, in addition to annoyance and pain, rob the fowl of needed nourishment.

BLUE OINTMENT IS BEST

"Lice have biting mouth parts, and are therefore easily poisoned. For this purpose, blue ointment is the most effective and easiest to apply. A piece about the size of a pea should be well rubbed into the fluff well up into the skin just below the vent. As the lice necessarily must come here for moisture, they are readily poisoned. The treatment should be repeated in a week or 10 days to assure killing those that hatch later.

"Another common remedy for lice is pyrethrum powder, which should be thoroughly dusted into the feathers. This powder is rather expensive, however, and homemade powder that is just as effective may be made at a saving. Use three parts of gasoline and one part of coal tar dip. Mix these together and add enough plaster of Paris or building cement to take up the moisture. This powder must be used often and is therefore not so effective as the method first described.

LEAVE FOWL BY DAY

"Mites are combated in a different manner because of a vital difference in their life habits. They live upon the fowl only at night, sucking the blood. They then leave the bird and hide in cracks, crevices, and filth during the day.

"Effective control is mostly through sanitation. Give the house a thorough cleaning. Throw out all litter and straw, clean out all filth, brush down the sides, and sweep the ceiling. Scrub out the house with warm water. Spray thoroughly with coal tar dip, carbolic acid mixed with water, or pure kerosene. In applying these solutions, a brush may be used but a spray pump is the most desirable. Repeat the spraying in a week or 10 days to assure the death of those that hatch after the first spraying."

AGGIE GRADUATES MAY GET PLACES IN REGULAR ARMY

Honor Men Are Recommended to War Department by Institution

The names of Glen Keith of Belleville, Joe B. Sweet of Manhattan, Roscoe I. McMillan and H. P. Miller of Kansas City, students in the agricultural college, have been recommended by Dr. H. J. Waters, president, and Captain L. O. Mathews, commandant, to the war department as honor graduates of the college. They are thus placed in line for appointment as second lieutenants in the regular army.

The war department advised President Waters that the college would be entitled to 10 more applicants for second lieutenantcies. The other six have not yet been named.

MISS ERBA KAULL IS CHOSEN CHANCELLOR OF QUILL CLUB

Writers' Organization Elects a Number of Students to Membership

Miss Erba Kaull of Glen Elder is the new chancellor of the Quill club, having been elected to succeed L. R. Hiatt, who returned to his father's farm. Miss Kaull is a senior in industrial journalism and a former president of Theta Sigma Phi, honorary journalism sorority. She is prominent in literary activities in the college.

Harold W. Snell of Manhattan succeeds M. P. Wilder as midan of the

Quill club, Mr. Wilder having gone to the officers' training camp.

The following students have been elected to the Quill club on the basis of meritorious literary work: Miss Sarah Boell of Riley, Miss Edna Boyle of Spivey, Miss Georgiana Burt of Eureka, H. Clyde Fisher of Manhattan, Walter Bergen of Martinsville, Ind., Floyd E. Oakes of Gypsum. John D. Cooke, instructor in English, was also elected to membership.

ALFALFA CONTAINS WHAT PIGS NEED FOR GROWTH

Is Most Desirable Pasture for Young Porkers, Says Instructor in Animal Husbandry

Alfalfa is the most desirable pasture for young pigs, as it contains the elements which are essential to their growth, asserts Ray Gatewood, instructor in animal husbandry in the Kansas State Agricultural college.

"The pigs may be given access to the pasture while they are still with their mother, and in case the mother can be put on alfalfa while she is suckling the litter it will add greatly to her milk flow," said Mr. Gatewood.

"It is difficult to make the change, however, without scouring the pigs and thus giving them a setback. The change should be gradual, leaving the sow on pasture only for a few minutes at a time until the pigs get accustomed to the change in her milk.

"A good alfalfa pasture will push pigs faster than any other pasture crop available in Kansas. It is succulent and of high feeding value. In pasturing on alfalfa the pigs get exercise which is essential in their development."

ORCHARD ISN'T PLACE FOR PASTURING SHEEP

Unless Large Acreage Is Available Animals Will Injure Trees, Says Horticulturist

Don't pasture the sheep in the orchard, unless you have such large areas to feed over that no damage will be done to the trees, is the advice of Albert Dickens, professor of horticulture in the Kansas State Agricultural college.

"Sheep are good feeders and will clean up a weedy orchard or any other patch of brush land in a short time," said Professor Dickens, "but the great danger comes in feeding sheep in a small orchard.

"Too many men believe that they can pasture any number of sheep in a small orchard without injury. The animals, however, will eat off the leaves, limiting the fruit buds for the next year, and will tramp the ground, destroying the tilth of the soil and slowing up the growth and productivity of the trees.

"Some men, such as Snider and Roedinger of Parker and George C. Richardson near Tonganoxie, have had success with feeding sheep in their orchards, but their conditions are different, as they have large orchards of 500 acres or more. The danger of injury to the trees is considerably lessened by the large areas which the sheep have to feed over. The best plan is to keep the sheep out of the orchard and let them clean up other weedy places on the farm."

Extension Workers Busy

M. G. Kirkpatrick, assistant in home study service, the division of extension, judged an oratorical contest at Blue Rapids Friday evening.

C. P. Thompson, specialist in animal husbandry in the division of extension, went to Dundee Tuesday to assist in the community assembly work there.

P. E. McNall, assistant in farm management in the division of extension, went to Troy Monday to assist W. R. Curry, county agent in Doniphan county, in farm management work.

L. C. Williams, assistant in the division of extension, judged the Washington county oratorical and declamatory contest Friday evening. Eight high schools were entered in this contest.

TO SHIP HORSES SAFELY

PRECAUTIONS NECESSARY TO PREVENT INJURY TO ANIMALS

David Gray Explains How Car Should Be Prepared—Special Care Should Be Taken to Protect Against Sudden Motion of Train

Horses being transported in freight cars are likely to be injured seriously if proper precautions are not taken, according to David Gray, assistant in animal husbandry in the Kansas State Agricultural college.

"The first thing to do in preparing the car," said Mr. Gray, "is to make sure that its sides are free from protruding nails, splinters, and sharp corners, which might cause injury to the horse. If the journey is long, sacks of straw may be hung around the walls to act as bumpers.

DO NOT TIE HORSE

"The horse should not be tied as it cannot brace itself as well as when it is free to move about. A sudden jerk of the car may throw the horse violently against the sides of the car. When it is tied, there is also danger of injuring the head and neck by a sudden movement of the train.

"One method of preparing the car is to build a stall in one end. A partition of heavy lumber should be built across the car two-thirds of the distance from the end to the door. Cleats may be nailed upright on the sides of the car and the cross pieces nailed to these. It is essential that the partition be well braced outside the stall with heavy lumber so that when the horse is thrown against it the weight will fall upon the brace and not on the partition solely."

METHOD PROVES ITS VALUE

This method was employed recently in bringing a valuable Belgian stallion for a distance of more than 1,000 miles to the agricultural college. This horse did not receive the slightest injury.

"In such a stall," commented Mr. Gray, "the bedding should be heavy and should be stirred up thoroughly two or three times each day. The motion of the car has a tendency to work the bedding away from the center of the stall. Each evening this bedding should be rearranged.

MAY USE ENTIRE CAR

"If but one horse is to be shipped, the entire car may be bedded and the horse given the freedom of the car. If feed and water are kept in the car with the horse, they should be securely fastened to prevent spilling. One of the doors may be nailed open and the opening boarded up with heavy lumber to afford ventilation.

"The main object in preparing the car for the shipment of the horse should be to protect him from the dangers of injury which may arise from sudden motions of the car. A violent fall to the floor or against the walls of the car may injure the horse permanently."

LEO MOSER TAKES FIRST PRIZE IN STORY CONTEST

Senior in Journalism Wins with "On to Berlin"—Bergen and Criswell Next

Leo C. Moser of Courtland, senior in industrial journalism, was awarded first place in the annual short story contest conducted by the Quill club. His story is entitled, "On to Berlin."

Walter Bergen of Martinsville, Ind., and Rex Criswell of Hardtner, tied for second place. Third place was won by F. E. Oakes of Gypsum.

H. Umberger, assistant state leader of county agents, went to Franklin county Monday to assist in the hog cholera eradication work.

H. B. Walker, drainage and irrigation engineer, will go to Valley Falls Thursday to investigate a 5,000 acre drainage district near that place.

George O. Greene, specialist in horticulture in the division of extension, left Sunday on a demonstration trip in Chase, Pawnee, Harvey, and McPherson counties. The first apple blotch spray being applied on this trip.

MILK AT LOWEST COST

DAIRY SPECIALIST CONDUCTS IMPORTANT EXPERIMENT

Tests Will Show What Feeds Will Produce Best Physical Development of Heifers and Furnish Maximum Product

An experiment that is expected to prove of inestimable value in the development of the dairy industry in Kansas is being conducted at the agricultural college under the direction of O. E. Reed, professor of dairy husbandry. Its purpose is to determine the feeds that will tend towards the perfect physical development of heifers and the production of a maximum amount of milk at the lowest possible cost.

"The tendency on the part of the average dairyman is to breed early and underfed," commented Professor Reed. "On account of this fact the dairy cattle do not attain full size. The best producers of any breed are those which have been fully developed to the breed standard."

SEVERAL RATIONS ARE FED

The experiment in question was started two years ago. Twenty-four grade Holstein heifers—all related—were fed on skim milk up to 6 months of age. Since that six heifers have been fed on alfalfa hay, another six on alfalfa hay and silage, and 12 on alfalfa hay, silage, and grain.

The heifers are bred to freshen at 30 months, with the exception of those in half the lot, which are fed grain as well as alfalfa hay and silage. These are bred to calf at two years. Professor Reed expects to find out whether or not cows getting the grain will develop sufficiently and give enough extra milk if allowed to calf six months earlier to pay for the extra feed they will receive. The experiment will be continued until the cows are 6 or 7 years old. By that time the department will have records on at least three milking periods.

TWO HEIFERS HAVE FRESHENED

Two of the heifers have already freshened. One of these, which is fed on alfalfa hay alone, is giving 30 pounds of milk a day and producing it at a low cost. She is eating 40 to 45 pounds of hay a day. The ordinary amount consumed is 15 to 20 pounds a day. The other heifer that has freshened is fed alfalfa, silage, and grain. It is producing 30 pounds of milk, eating 12 pounds of hay, 30 pounds of silage, and seven pounds of grain.

The cattle in the experiment are weighed every month, and their measurements taken.

WILSON COUNTY BUREAU MAKES LIVE STOCK PROMOTION TRIPS

Addresses Illustrated with Lantern Slides Form Feature of Tours

Three live stock promotion tours were recently made in Wilson county. These tours were arranged by the county farm bureau. Carl P. Thompson, animal husbandry specialist in the division of extension of the agricultural college, accompanied the party and made a number of short talks on beef cattle, horses, sheep, dairy cattle, and hogs. Lantern slide lectures were the evening features. Attendance was good, considering the time of year, and much interest was shown in the subjects treated.

HORSES' TEETH SHOULD BE EXAMINED EVERY TWO YEARS

Mastication Is Interfered with if Mouth is in Bad Condition

Horses' teeth should be examined every two years for such irregularities as sharp points and edges, elongated molars, decayed condition, and abscesses, in the opinion of Dr. R. R. Dykstra, professor of surgery in the Kansas State Agricultural college.

Sharp points and edges are caused by the fact that the upper and lower grinding teeth in the mouth of the horse do not hit squarely, pointed out Doctor Dykstra. Because of the construction of the mouth, the inside edges of the lower molars and the outside edges of the upper molars do not strike any-

thing when the horse chews, and consequently do not wear. The lateral motion of the jaw when chewing is not sufficient to allow uniform wear on the edges of the molars, hence sharp points and edges result.

All decayed teeth or abscessed teeth should be removed as soon as discovered. When a tooth is removed, the corresponding tooth on the opposite jaw will grow far enough into the empty space to hit the gum. If the teeth are examined and filed every two years the elongated molars and sharp edges will cause no trouble.

The teeth may be examined by putting the hand into the mouth when it is held open by an instrument intended for that purpose. The animal cannot masticate its food properly when the teeth are subject to any of the irregularities mentioned.

PORCH BOXES ADD TO APPEARANCE OF HOUSE

They May Be Started at Small Cost and Are Constant Source of Pleasure, Points Out M. F. Ahearn

Porch boxes give an added attraction to the home and may be started with a small outlay of money, pointed out M. F. Ahearn, associate professor of horticulture in the Kansas State Agricultural college.

"Many plants that have been kept in the house during the winter are available for the porch box in the summer," said Professor Ahearn. "If the box is placed on the shady side of the house, some of the hardier ferns, violets, pansies, heliotropes, and English ivy may be used in forming a beautiful porch box."

"On the sunny side of the porch bright red single geraniums, silver leaf geranium, German ivy, vining vinca, and flowering vinca may be used to produce a splendid effect. Different combinations may be secured by using some of the ornamental foliage plants such as coleus."

"If the box is from four to six feet long, a red geranium might be placed at either end of the box and one in the center. In front plant alternately variegated vinca major and German ivy. Between and a little in front of the geraniums set a begonia semperflorens. Back of the geranium and at a distance of one foot apart, alternate yellow and red coleus. Between the coleus and geraniums, if there is sufficient bloom, place four vinca alba plants."

"Another type of porch box is obtained by use of evergreens. Plant dwarf juniper arbor vitae and spruce. These should be young and not more than 10 to 15 inches in height. This porch box is available the year round until the plants outgrow their quarters. If it is desired to have a vine in this combination use Boston ivy."

FOUR-FIFTHS OF STALLIONS ADVERTISED ARE PUREBREDS

Kansas Conditions Show Big Improvement in Last Few Years

Eighty per cent of the stallions advertised for public service in Kansas this year are purebreds and only 20 per cent grades and scrubs, according to Dr. C. W. McCampbell, secretary of the state live stock registry board.

In 1909, the year before Kansas had a stallion license law, 70 per cent of all the stallions advertised for public service were advertised as purebreds while half of them actually were grades and scrubs. Not one grade or scrub stallion has been advertised as a purebred this year as compared with 2,022 of them in 1909. The stallion license law will not permit fraudulent advertising.

A great change also has taken place in the kind of stallions standing for public service in Kansas. In the last six years, the grades and scrubs standing for public service in Kansas have decreased 1,300 and the purebreds have increased 700.

This demand for sires of better breeding is due largely to the enforcement of the stallion license law, the main purpose of which is to give stallion patrons a means of knowing exactly the breeding of any stallion they may wish to patronize.

ADDS TO SHEEP PROFIT

CARE ON PART OF OWNER MEANS MATERIAL GAIN

Special Attention Should Be Given to Animals When They Are First Turned upon Grass, Says Specialist—Tonic May Help

A little care and observation on the part of the owner as to the comfort and health of his sheep often materially increases his profits, believes A. M. Paterson, instructor in animal husbandry in the Kansas State Agricultural college.

"After the sheep have been turned on pasture they will require little attention," said Mr. Paterson. "If the pasture is abundant they will need no other feed, except perhaps a little grain for very thin old ewes that are nursing lambs. A little grain fed to such a ewe will aid in building up the ewe's body and will increase the flow of milk, thus making much better lambs."

SHEEP MAY OVEREAT

"Great care should be exercised when the flock is first turned upon grass. At this time when the grass is succulent and palatable there is great danger of the sheep overeating. This may cause bloat, which often results in death."

"It is well to give the sheep an abundant supply of dry feed before turning them upon the new grass, allowing them to stay on pasture only a short time at first, gradually increasing the length of time of pasturing until they become accustomed to the new feed. Then practically all danger is past."

SEE THAT GRASS IS DRY

"Care should be taken at this season not to turn the sheep out when the grass is damp."

"Clean, fresh water and salt should be before the sheep all the time. By mixing some sulphur with the salt an excellent tonic may be made. Sulphur should not be given until the weather is warm, as it has a tendency to open the pores of the skin and in cold weather to make the sheep susceptible to colds."

A mistake that is often made is taking the grain away from the lambs when they are turned on grass, believes Mr. Paterson. Some arrangement should be made for feeding the lambs grain. By so doing they will be larger, in better condition, and ready to market quicker, which means larger profits.

WEANED WHEN 4 MONTHS OLD

Lambs should be weaned when about 4 months old. Much, of course, depends upon the size of the lambs and the condition of the ewes. In cases where the ewes are poor and run down and the lambs are large, it may be well to wean earlier in order to build up the condition of the ewes before breeding. Where the opposite is true, the lambs may not be weaned until later.

It is a good plan to wean the lambs gradually, as this will eliminate having to milk the ewes, and the lambs will do much better. The lambs should have plenty of grain and pasture at this time.

The ewes should be put on a dry feed for a few days at weaning time in order to stop the flow of milk. The udders should be watched closely and milked when necessary. If the udder is allowed to cake it may be ruined, thus reducing the ewe's future usefulness and materially lessening the profit. Special care should be taken of the lambs at weaning time in order that their growth may not be in the least retarded.

COLT MAY BE INJURED BY TOO HEAVY WORK AT FIRST

Should Receive Liberal Feeds of Grain Before Season Starts

Colts are sometimes injured by inexperienced drivers or men who try to do too much when starting to work them. They seem to think that because the colt is large he can do as much as the mature horse.

"Give the colt light work," advises Dr. C. W. McCampbell, associate professor of animal husbandry in the

Kansas State Agricultural college. "The colt should be prepared for the season's work if he is to do his best. Liberal grain feeding should begin a few weeks before the work starts. A three year old colt handled in this manner after a few weeks' preparatory work will be able to do considerable work but of course he should be given a day of rest occasionally."

"Caution should be taken not to overwork the colt at first. There is danger of sweeny, broken wind, or other serious trouble which probably would put the horse out of business for an entire season."

SPECIAL APPLIANCES ARE USEFUL IN POULTRY WORK

Many of These Can Be Made Cheaply at Home, Points Out Prof. Ross M. Sherwood

Special appliances are valuable in poultry raising, according to Ross M. Sherwood, acting head of the department of poultry husbandry in the Kansas State Agricultural college. In many cases these appliances can be made cheaply at home.

The supply bin is used for convenience, and saves going to the granary, pointed out Mr. Sherwood. The size depends on the number of fowls. This bin may be of metal or wood, or even a tight barrel placed on the floor or on the wall would answer the purpose.

The self-feeder is used for feeding bone, mash, or charcoal. This feeder has a sloping bottom, and the feed slips down as fast as it is consumed. It is well to have it on a platform two feet high.

The feeding trough is used for moist mashes. This may be made of wood or metal. Often a V-shaped trough with slats across it is used. The only objection to wooden troughs is that milk sometimes gets into the cracks and causes poisonous molds to grow.

A water fountain may be made by taking a bucket, cutting a hole near the top, and setting it up side down in a pan. The top should not be flat, as the chickens will then perch on it and contaminate the water with droppings. The pan should be on a platform so that straw will not be scratched into it.

The devices for small chicks are nearly the same, except smaller. In the self-feeder, bone is used. A netting is placed over the feeding trough to keep the chicks from scratching the feed out.

RAIN DETERMINES LARGELY METHOD OF PLANTING CORN

Eastern and Western Parts of State Differ in Their Requirements

Listing corn in western Kansas and surface planting in eastern Kansas is advised by S. C. Salmon, associate professor of farm crops in the Kansas State Agricultural college.

The listing of corn in western Kansas is more successful because the plants are given a better start and the ridges can be worked down about the roots, thus giving the plant a support, Professor Salmon contends. Another factor is that the furrows made by the lister save and hold the moisture.

Eastern Kansas can use the surface planting method to advantage because of the abundance of rainfall.

The start is an important factor in corn growing. When corn is listed the soil under the surface is not so warm as the surface soil, and consequently germination is delayed for a short time. Corn is more often blown down when surface planted than when listed. The reason for this is that the roots which serve as props are too close to the surface.

The main disadvantage of listing corn in eastern Kansas is that the furrows hold too much water and often kill out the crop. The difference in the method of planting in the eastern and the western parts of the state is influenced mostly by the amount of rain during the growing season, rather than by the composition of the soil.

T. H. Parks, specialist in entomology in the division of extension, went to Marshall county Monday to assist F. B. Williams, county agent in that county, in his orchard spraying work.

SUDAN GRASS FOR HAY

IS ADAPTED TO REGIONS NOT SUITED TO ALFALFA

Is Useful Also for Pasture Purposes—Drilling or Broadcasting Is Best Method of Seeding for These Uses

That Sudan grass should be grown for hay or pasture by those farmers who cannot grow alfalfa, is the opinion of G. E. Thompson, crop specialist in the extension department of the Kansas State Agricultural college.

Sudan grass is adapted to practically all types of soil in the state except those very wet and poorly drained, extremely alkali, or unusually sandy. Sudan grass will not compete with alfalfa on land where alfalfa will grow well. The grass will be profitable in those sections too dry for any crop except a sorghum.

TWO OR THREE CUTTINGS

Sudan grass, which belongs to the sorghum family, is adapted to the same conditions as kafir, milo, or feterita. Sudan grass will make two to three cuttings of hay. If pastured, it will give good grazing throughout the season.

Two methods of planting are used. One is that of planting in cultivated rows and the other sowing with a broadcast seeder or drilling with a grain drill. If the seed is planted in rows two to four pounds to the acre is used, but when drilled or sown broadcast 15 to 25 pounds to the acre is required. Drilling or broadcasting is the better way to plant this crop if it is to be used for pasture or hay.

STANDS ABOVE PRAIRIE GRASS

As a pasture crop Sudan grass is just coming into popularity. It will pasture more stock to the acre than native grass. The feeding value of Sudan grass is not equal to that of alfalfa, but is much higher than that of prairie grass.

Poisoning from Sudan grass is rare. A large acreage was pastured in 1916 but only two cases of poisoning were reported in the United States.

As a hay crop Sudan grass is excelled only by a leguminous crop such as alfalfa or clover. In a good season three cuttings can be had, yielding together two to four tons to an acre.

Some farmers sow Sudan grass around the alfalfa field in places where the alfalfa has failed to make a stand. The grass can be cut every time the alfalfa is cut and gives good hay.

WHEN CAPONIZING PAYS AND WHEN IT DOES NOT

Profitable for Small Producer Only for Late Hatchings or Special Market

Caponizing is unprofitable for the small producer, except in case of late hatchings or special markets, according to F. E. Fox, assistant in poultry husbandry, Kansas State Agricultural college.

"Ordinarily there is no demand for capons at the local market," said Mr. Fox. "They go on the market to compete with springs, and the purchaser will buy springs rather than pay a higher price for capons."

"In case of late hatchings, however, this is not true. These are too late to go on the market as springs, and it is advisable to caponize them. Capons are less active and nervous, make better growth, and fatten more readily than cockerels."

"The operation is simple and comparatively inexpensive. All instruments necessary cost from \$2.50 to \$5. The loss from caponizing need not exceed 5 per cent. Fowls that die do so soon after the operation and bleed well. They may be dressed for table use, so that the loss is insignificant."

"In case 12 or 15 farmers wish to cooperate and caponize all their male birds, caponizing may be made quite profitable. By so doing, the producers could ship to a central market such as Kansas City where there is certain to be a demand for capons. Ordinarily when other chickens are selling for 16 cents per pound capons bring 22 or 23 cents per pound."

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WILL BE WORLD SLACKER

WOMAN WHO NEGLECTS CHANCE TO SERVE MERITS CRITICISM

College Alumnae Should Prepare for Rebuilding World After War, Urges Secretary of Association—Opportunities Open Now Also

Any young woman who neglects the opportunity in this war time to prepare for the rebuilding of the world will be a world slacker, in the opinion of Miss Ada Rice, secretary of the Kansas State Agricultural College Alumni association.

Miss Rice points out that at the close of the war there must be a rebuilding of national and international life. This will call for the best qualities of leadership and the best training, and in this work the college woman can play a part of great importance.

DON'T WAIT TILL WAR ENDS

College women must not wait until the end of the war for service, however, states Miss Rice. "The time is now at hand," she declares, "when the world must depend upon woman for carrying forward progressive movements." She urges college women, particularly the graduates of the Kansas State Agricultural college, to take an active interest and perform active service in the big movements now in progress.

"We find big problems awaiting us," said Miss Rice. "We must open our eyes and see that to woman has fallen the problem of the elimination of waste, even in methods of food production. What we need is careful, intelligent, systematic organization.

MAKE FOOD SPECULATION CRIME

"It is further woman's responsibility to see that speculation in foods shall be made a crime. She must so control legislation that a disgrace like gambling on wheat while the world faces starvation cannot be repeated. She must see that the making of a multimillionaire by cornering the egg market shall be an impossibility while millions of children become sick and die from malnutrition. She must demand that those who raise the food to save the world shall receive a fair return for their labor.

"It is her responsibility also to control the consumption of food products. It is for her to demand that no grain produced in this country be used for making articles which destroy health and life. Every woman knows that the turning of millions of bushels of grain into the production of alcoholic liquors is not so much a loss in food values as in human lives.

SAFEGUARD SONS AND BROTHERS

"The American women ought to join with the Canadian women in the demand of the safeguarding of their sons and brothers in camp and field from a more dangerous foe than an armed force."

Miss Rice points out also that it is woman's immediate duty to make such changes in the dietary as will enable the people to be well nourished with less waste. She cautions, however, against narrowness and provincialism in the solution of this problem, urging that the young woman graduate of the agricultural college go beyond her neighborhood and consider the needs of the city poor. The child of the city, she says, must be as well nourished as the child of the country, and the mothers must be taught a simple, wholesome dietary and good food must be at hand at reasonable prices, else there will be a greater waste of human life in crowded city homes than has ever before occurred in America.

COLLEGE WOMAN A TEACHER

The teaching duty of the college woman is emphasized also by Miss Rice. She should organize canning clubs, sewing clubs, and other organizations which will be helpful in the

period of the war. She should also assume the responsibility for conserving educational resources and seeing that the youth of the country are kept in the schools.

"We shall need trained men and women in the future," continued Miss Rice, "and if we are to have them the schools and colleges must be kept filled."

KANSAS STOCKMEN WILL MEET IN FORCE JUNE 1

Murdo McKenzie of Brazil Is Scheduled to Speak—Results of Experiments Will Be Given

Hundreds of Kansas and other stockmen are expected to attend the fifth annual cattlemen's meeting to be held at the agricultural college June 1.

One of the speakers will be Murdo McKenzie of San Paulo, Brazil, manager of the leading land and cattle company of that country. Mr. McKenzie was formerly manager of the well-known Matador ranch and president of the American National Live Stock association. He will speak on "South America as a Customer and a Competitor."

P. W. Goebel, president of the Commercial National bank of Kansas City, Kan., and of the American Banking association, will speak on "Financing the Cattle Industry." T. H. Ingwersen of Chicago, for 28 years a cattle buyer on the Chicago market, will discuss "The Cattle Buyer's Viewpoint." W. R. Stubbs, president of the Kansas Cattlemen's association and former governor, will be a speaker.

Dr. Henry J. Waters, president of the Kansas State Agricultural college, will preside at the morning session and Arthur Capper, governor of Kansas, in the afternoon.

The visitors will be taken on an automobile trip to the agronomy farm where the field experiments will be explained. An opportunity will be given to inspect the dairy herd and other college stock.

The results of experimental work conducted at Manhattan in which 84 head of cattle are being used will be given. A comparison is being made between the feeding value of corn and barley and also between alfalfa hay and sweet clover. The comparative value of the influence of the different methods of curing alfalfa in fattening cattle is being ascertained.

CELERY LIABLE TO ATTACK BY EARLY OR LATE BLIGHT

Leaf Spots Are Caused and Stalks Are Sometimes Injured

Celery is liable to attack from early or late blight, warns the committee on plant diseases, Kansas council of defense. The blights of celery cause serious leaf spots and the injury may extend even to the stalks. Hotels and restaurants do not buy celery if the leaves are rotted off—the result of an attack of blight. The late blight, especially, continues to spread even after the plants are placed in storage.

If the disease has been known to cause damage in any locality, precautions should be taken to prevent its recurrence. This may be done by timely spraying with Bordeaux mixture, using four pounds of blue vitriol, four pounds of stone lime, and 50 gallons of water. The plants should be sprayed when set out in the field and at intervals of seven to 10 days thereafter, according to weather conditions.

If celery is placed in cold storage, it is necessary to remove all indications of diseased foliage so that a rot may not set in. Celery should be stored at a temperature as low as possible consistent with the keeping of this vegetable. Members of the plant disease committee will if necessary make visits to regions where the disease appears.

TO STOP FRUIT WASTE

EFFORT SHOULD BE MADE TO UTILIZE ENTIRE CROP

Care Should Be Taken in Picking and Handling Strawberries—Grading Makes Fruit More Profitable, Says Specialist

Small fruits will be an important factor in the food conservation campaign this year. In the past valuable produce has been wasted, pointed out M. F. Ahearn, associate professor of horticulture in the Kansas State Agricultural college.

Strawberries should be carefully handled to avoid bruising, according to Professor Ahearn. The stage of maturity for picking depends upon the distance they are to be shipped. When grown for a local market berries should be thoroughly ripe and not soft when picked. If grown for a distant market they must be picked before they are entirely ripe, but should be fully grown and three-fourths ripe. If picked before they are colored the berries will shrink and wither, making them unfit for sale.

HOW TO PICK FRUIT

This fruit should be picked with from one-fourth to one-half inches of stem attached. When slipped from the stem their appearance is spoiled and their shipping and keeping qualities are injured.

Grade the berries and have them uniform. Different varieties packed together in the same box will lessen the attractiveness. Berries of light red color, which look well by themselves, will show up poorly beside darker ones. Medium and small berries which could command a fair price will, if packed with larger fruit, look inferior and spoil the sale of both. Grading may be done in a rough way by the pickers as they pick.

WILL BRING BEST PRICE

Once it becomes known that the fruit of an individual can be relied upon always and that the bottom of the box will contain just as fine fruit as the top, that person will be able to command the highest price for his product.

The top layer of the box should be arranged attractively. If the berries are round in form they should be placed stems down. If they are long they appear much better when laid on their sides, glossy side up. Small berries attract attention best when the top ones are placed in rows stems down.

Do not press the berries when packing. Lay them in place with care to avoid bruising them. Fill the boxes full—in fact, round them up. They will keep tight and ride better this way.

DAVID HARUM APPEARS IN MOVIES IN AUDITORIUM

Play Is Presented for Benefit of Representative in China

"David Harum," a photoplay featuring William H. Crane in the principal role, was shown at the auditorium Monday afternoon and evening.

This show was given for the purpose of raising money for the maintenance of C. O. Levine, the agricultural college representative at the Canton Christian college, Canton, China.

The story of "David Harum" with his genuine American humor was reproduced delightfully in this picture and was enjoyed by those who attended.

SHEEP EAT 575 OF 600 KINDS OF KANSAS WEEDS

They May Be Used to Keep Roadsides and Fence Corners Tidy

"Sheep will eat 575 of the 600 kinds of weeds that grow in Kansas while cattle will eat only 75," declared A. M. Paterson, instructor in animal husbandry in the Kansas State Agricultural college.

"Roadsides, lanes, and fence corners may be kept clean and tidy by a flock of sheep," said Mr. Paterson. "Not only will the sheep rid the fields of weeds and turn them into a marketable product, but they will return the fertility of the soil to the land in the form of manure. Sheep will graze with cattle nicely where grass is abundant and will eat the plants the other stock leave."

"Most farms have feed lots and yards which annually grow up to unsightly weeds. Bysowing rape in these places and pasturing sheep on it, the appearance of the farm would be much improved and money would be made."

DON'T OVERSTOCK WITH FLOUR AND DRIED FRUITS

Housewives Are Warned to Guard Against Insect Infestation in Bins and Drawers

That purchase by housewives of large supplies of flour, meal, and breakfast foods in order to avoid payment later of higher prices, probably will not be economical in the long run because of likelihood of insect infestation, is the opinion of George A. Dean, professor of entomology in the Kansas State Agricultural college.

The mill products, together with spices and dried fruits, are apt to become infested with worms, varying in size from those scarcely exceeding one-eighth of an inch in length to worms three-fourths of an inch long. Many of these may be the larvae of several species of beetles, while others are the larvae of small moths.

These are always more common in the pantry, flour closet or cabinet, or places where mill products are stored. They are usually brought into the house with the purchased packets of breakfast foods, bags of corn meal, flour and other mill products, and when they are once established, it is not easy to get rid of them.

Thorough cleanliness is necessary at all times. All shelves and corners in the pantry should be kept entirely free of accumulations of meal, flour and breakfast cereals. All infested material should be removed and not allowed to remain to breed insects. Never push partly used packages back in corners to remain for months and attract the insects.

Many times a glass jar or a box, or a chest of drawers becomes badly infested because it is never quite emptied. When the supply is within an inch or a half inch of the bottom a new lot is added, and the infested material at the bottom infests the new material in a few days.

One of the most practical means of destroying insects in boxes and the drawers of kitchen cabinets—especially those that are hiding and breeding in cracks of these receptacles—is to heat the box or drawer to a temperature of from 120 to 125 degrees. There is no stage of an insect, infesting mill products, that can withstand a temperature of from 116 to 122 degrees for a period of 10 minutes.

RALPH KENNEY LEAVES FOR PARAGUAY, SOUTH AMERICA

Instructor in Crops Now with Central Products Company

Ralph Kenney, assistant professor of crops, has accepted a position with the Central Products company of New York operating in Paraguay, South America. Mr. and Mrs. Kenney, who have left Manhattan, will spend some time in Ohio. They will sail from New York June 1.

Mr. Kenney, assisted by Paul Weise of Ames, in charge of the dairy herd for the governor of Cuba, will supervise the dividing of the company's land into small ranches. They are to determine the size of the ranches, and advise what forage crops can be most profitably grown.

BEST PLAN FOR SERVICE

KANSANS SHOULD MAKE WORLD'S BUSINESS THEIR BUSINESS

West Is Beginning to Demonstrate that It Has Right Kind of Patriotism—Marco Morrow of Topeka Is College Speaker

That Kansans should make the world's business their business was the assertion of Marco Morrow of Topeka, advertising director of the Capper Farm publications, in an address before the student assembly in the college auditorium Tuesday morning on "Business Is Business."

"Plant and cultivate, produce and consume," was Mr. Morrow's suggestion. "The west has not sympathized with the panics in the east and consequently we have often been accused of lack of patriotism. We are beginning to show that that is not true. I do wonder, however, if we really appreciate the situation."

"Is the price the only thing that will enter into the conscience of the American people in considering this matter of production? Are we talking too much about patriotism in the business affairs of everyday life? I do not believe that the students have come here to give two or three years of their lives for the mere purpose of learning how to make a living. It may be important to make a living, but it is not absolutely necessary. We must make the world's business our business. Business is not alone to pay dividends to stockholders."

SERVICE OF MAN FOR MAN

"The newspaper man and the farmer, just as surely as the railroad, exist not to prey upon the people but to serve the people. The farmer and the newspaper man are not exactly chartered by the state as is the railroad company, but the farmer does get the title for his land from the state. The newspaper man exists by the sufferance of the public. He can make the good will of the public the biggest asset of his business and he gains this good will by service."

"The farmer fences off a portion of God's green earth and appropriates it by the consent of society to his own use, but he owes society something for it. We often think that the farmer is the most independent of all business men—that he owes nothing to anybody. Well, how would you like to run a farm on a desert island a thousand miles out in the Pacific ocean?"

BUSINESS IS BUSINESS

"The farmer no more than any other man lives to himself alone. Business is business, but it is mutual, so I believe what we produce here in the west will not be altogether determined by the price we hope to get for our produce."

"If we are going to get any one thing out of the war—and we cannot go through it without getting something—I believe it will be an appreciation of the fact that service does not consist entirely of going to the trenches in time of trouble. It does not consist entirely of feeding the army in time of trouble. Our duty to production and conservation was just as clear before and will be after as it is during the war."

ADVERTISING AS PUBLIC UTILITY

Mr. Morrow spoke to students in industrial journalism and English on "The Upstairs and Downstairs of the Newspaper."

The attitude of many persons is that advertising is something unnecessary. The real economic function of advertising is to show the general public how to buy, pointed out the speaker. The general opinion has been that advertising is simply a means of selling goods. Advertising should be made a public utility.

THE KANSAS INDUSTRIALIST

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H. J. WATERS, PRESIDENT.....Editor-in-Chief
N. A. CRAWFORD.....Managing Editor
J. D. WALTERS.....Local Editor
ADA RICE, '95, M. S. '12.....Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The price of THE KANSAS INDUSTRIALIST is 75 cents a year, payable in advance. The paper is sent free, however, to alumni, to officers of the state, and to members of the legislature.

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WEDNESDAY, MAY 23, 1917

REAL PATRIOTIC SERVICE

It used to be thought that the grasshopper, the cankerworm, and the other agents of agricultural destruction were visitations from God, to be borne meekly and to be averted only by prayer and repentance. Modern discovery has shown, however, that the means for the elimination of these pests is in the hands of man.

The world's annual loss through plant diseases and animal pests, including destructive insects, amounts easily to several billion dollars. Most of this loss could be prevented with the knowledge that is now available.

Right now, with the demand for food products the heaviest in the world's history, every farmer and every gardener should make up his mind that no preventable loss shall occur on his place this year. He should determine that none of the food intended for the armies of the United States and its allies shall go to feed gophers, rats, worms, or any other pests and enable them to multiply and their brood to feed on next year's crops. He should destroy, so far as possible, every trace of plant disease. This will be real patriotic service.

A RAPID SCHOOL CENSUS

New York state has given a demonstration of speed and economy in taking an agricultural census. The food supply commission, appointed on April 13, was ordered to take such a census on April 17. By making use of existing state agencies, the county farm bureaus and the entire school system, the work of enumeration was so speeded up that by April 28 complete returns from a majority of the counties were available. The total cost has not yet been announced but it is confidently expected that costs will set a new record for economy in such work. The use of the school children was a big factor in reducing costs, and it is probable that most of the youngsters received a broadening vision of the practical things of the life about them that more than compensated for loss of regular school work. The plan is well worth imitation by other states.—Pennsylvania Farmer.

FACE DIFFICULT PROBLEM

The farm poultrymen are facing a difficult problem in high feed prices. That is, some are facing it, and many are running away from it. Farmers and poultrymen sold off many hens last fall that would ordinarily have been held over for breeding purposes and egg production. Egg buyers report the egg production throughout the west as 20 to 40 per cent below that of last year.

The high cost of feeds and the relatively low price of poultry products are the universal causes of the condition revealed by these figures. Farmers have been selling off their flocks rather than feed them through the off

season on high priced feeds. But there must be a turning point. The decreased production must bring higher prices for eggs next fall and winter. The farmer poultryman who can hang on, who handles his flock wisely and who grows his new flock of layers with care and with the least waste is bound to win out in the long run. This is a good year to caponize all male birds after the breeding season is over. Sterile eggs are better eggs, and the roosters are expensive to feed throughout the summer. Caponizing is a comparatively simple operation, and the capons fatten more cheaply and bring a better price on the market.—Pennsylvania Farmer.

FARM, FIGHT, OR FINANCE

As Commissioner of Agriculture Wade of Alabama very aptly says, there are three ways men of the south can help win the war: produce, fight, or furnish credit. That our young men will help do the fighting is certain. Then it is up to our farmers to do the producing and our business men to finance them in order that they may produce to the utmost.

This matter of producing bountiful crops is not alone the farmer's problem. The city dweller too has a vital part to play in it, and playing this part is going to mean a whole lot more than holding meetings and advising through the daily papers and otherwise as to how the farmer should conduct his business. It is going to mean that the business men must solidly back the farmer with credit to aid him in growing the crop and marketing facilities next fall that will insure him in so far as possible against gluts and low prices.

Talk is cheap, but it is all right if it is the right kind. In this case, the right kind is the kind that is backed up by deeds. The farmer's duty in this time of national need is plain, but the business man, too, has a duty and the manner of his performing it will be the test of his earnestness and patriotism. Let every man attest his loyalty by concrete service.—Progressive Farmer.

THE COUNTY AGENT AGAIN

We have already, on more than one occasion, pointed out the need of increasing the activity of the county agricultural agents of the country at this time. In no way can the agricultural effort of the country be better organized and encouraged than through the efforts of those county agents provided for through the coöperation of the federal government and the localities where they have been assigned to duty. The duties and responsibilities of the county agent are admirably outlined by Wallace's Farmer:

"The job of the county agent is not to show the farmer how to farm, but to do what he can to help the farmer farm to better advantage. Under the present conditions, the live county agent will be more of a business helper to the farmer than anything else. He will organize to supply labor where it is needed, to secure seeds which are likely to be needed for late planting, to make arrangements for the prompt building of silos on farms where they are wanted, to fight hog cholera and other animal diseases; in general, make himself useful to the farmer. If there was ever a time when a county agent could be used to great advantage, now is the time; and the farmers and business men of every county should get together at the earliest possible date, organize, and secure a good, live man."

We commend this appeal to all communities which have not yet availed themselves of the services of a progressive county agent.—The Outlook.

SORGHUM DAYS AGAIN

Kansas is babbitting the old sorghum mill and getting ready to snap its fingers at the increased price of sugar. Time was when every little farming community had its sorghum grinder and big pan for boiling down the juice into "larrup," but sorghum making has become almost a lost art the past quarter of a century. The

report for 1916 showed only 394,000 gallons of sorghum molasses produced in the state. In 1889, when the industry was going at about its best, the state turned out 5,331,589 gallons.

There may be some among us who believe that even 394,000 gallons of sorghum molasses is enough, but a true Kansan has no such illusions. Back in the days when granulated sugar was a luxury and fruit was limited to dried apples, apricots, and prunes, sorghum molasses was in truth a lifesaver.

And, so far as the boys on the farm were concerned, there was fun connected with the production of molasses, too. Along early in the fall, when the seeds on the long stalks of cane were black and the juice was sweet as sugar, came molasses time. With flat sticks the boots were stripped from the cane.

The experimental corn is all planted, and sorghum seeding is in progress as THE INDUSTRIALIST goes to press.

President Fairchild will preach the memorial sermon in the Methodist church Sunday, May 29, at 3 o'clock p. m.

H. P. Wareham, student in 1887-'88, lost 2,000 tons of ice by the high water at Lawrence, where he has a large ice house.

D. E. Bundy, '89, writes from his farm at Schroyer that he cleared about \$1,500 last year, with only \$200 capital to start with.

The Rev. Robert McIntyre of Chicago has been secured by the college societies to deliver their annual address June 3.

Professor Walters is experimenting with colors upon enlarged photographs

Mars Has Descended

Edgar Lee Masters in Poetry

MARS has descended from Olympus and is policing the domain of our national life. At once everything becomes different. All our emotions take on a change; our outlook brightens or darkens as the case may be. Our desires clarify themselves or suffer greater bewilderment; our wills slacken or intensify themselves. In a word, we are remade. That which the intuitionists foresee comes to pass. A profound psychology is shot through us. We begin to move as one man, feel as one man. A spiritual unity electrifies us. We seem to be obeying the voice of God. Noble impulses, such as love for mankind, love for democracy, passionate eagerness for individual and national sacrifice, flame in our hearts. Visions of a regenerated world, a universal democracy, a nobler humanity; visions of a spiritual awakening at home flash their sunlit wings before our eyes. For Mars has descended and is walking among us.

Then the stocks were chopped down and the seeds cut off and saved until the threshing machine should pull in. The work was entered into with zest, for it betokened speedy and material reward in a fresh mess of molasses and also because it meant a trip to the sorghum mill and an inspection of its wonderful machinery.

Stripped and topped, the stalks were corded upon a wagon and hauled to the mill, which separated the succulent juice from the pith of the stalks and ran it into buckets to be carried and emptied into the steaming pan, where it bubbled and sputtered and exuded its sweetness upon the autumn air until it had been reduced to the desired thickness. Sometimes the fire of dried stalks, pith, and "surface coal" under the pan would get too hot or the boys would become remiss in their stirring and the sugary mass would bescorched, but everybody was good natured at sorghum time and the "old man" usually would not be harsh.

Then would come the job of drawing off the molasses into jugs and jars and the trip back home in the rattling old lumber wagon with the winter's supply of sorghum safely aboard.

There may be some incongruity about sorghum time in these days of motor cars and picture shows and other incidents of an effete civilization, but sorghum molasses still will be found of great value in the saving of sugar, and there is scarcely a limit to the amount of it Kansas and its neighbors can produce.—Kansas City Star.

A QUARTER CENTURY AGO

Items from The Industrialist of May 21, 1892

Professor Rain visits friends in Topeka this week.

The cannon woke the echoes Thursday in artillery drill.

The Rev. H. D. Platt, brother of Prof. J. E. Platt, was a visitor at the college on Wednesday.

Assistant Chemist Breese is comfortably settled in the Kellerman cottage west of the college.

of the grounds and buildings with a good degree of success.

Assistant Botanist Carleton visited Lawrence on Wednesday and Thursday, and added largely to the department's collection of rusts.

The new catalogue is printed, and will soon be issued. It makes 64 pages of names and descriptive matter, with explanations of course of study, etc.

J. E. Taylor, third-year, drops out to put into practice his knowledge of carpentry in repairing damages by storm to buildings on his father's farm in Shawnee county.

"The last car of coal for the season" has been ordered three times already, and with present prospects such an order is likely to be a weekly occurrence all summer.

The Kansas Capital publishes a paper read by our farm foreman, Mr. Shelton, at a recent meeting of the Manhattan Horticultural society, entitled, "A Beginner's Story of Success with Strawberries."

The high water covering the road and connecting Eureka Lake with the Kansas river does not deter several merry parties of young folks from visiting Fort Riley today. The high water no doubt adds to the interest of the trip, since it compels traveling over a road that is both longer and more picturesque than the regular route.

A cablegram from the vice-consul of the United States at Liverpool, England, received last Wednesday, announces the death at that city of the Hon. John A. Anderson, the former president of the college, ex-congressman of this district, and, at the time of his death, the United States consul at Cairo, Egypt. Mr. Anderson had been known to be in poor health for some time, and was on his way home on that account. The body will be forwarded to America and buried in the cemetery at Junction City, Kan., by the side of his father, mother, and wife.

PREPAREDNESS STUFF

S. W. Callen, '12

Little bits of flour,
Little grains of wheat
Make the twelve-ounce bread loaf
Which the world must eat.

Little flakes of corn meal,
Little grains of maize
Will keep an army going
On nothing else for days.

Every flake of oatmeal,
Every little oat
Will help an allied soldier
To get a German's goat.

Every strip of bacon,
Every little squeal
Heartens up the fighters,
Greases every wheel.

Beans and peas and peanuts
All help to turn the trick,
You wouldn't think it, but they
Make those who lack them sick.

Every little chicken,
Each sedate old hen
(The kind that make egg markets,
Not the kind that charm the men)
Make Hindenburg look sober
And trouble in Berlin.

Every little lambkin
Sporting on the hill
Makes "Ich und Gott" come doubtful
From pious Kaiser Bill.

SUNFLOWERS

We trust that the back-to-the-backyard movement will teach folks what the soil is for.

The assessor's report shows that there are 227 goats in Riley county, not counting any of us.

What has become of the old-fashioned pantry where you could find something to eat between meals?

Some people have fairly good sense and others still want to argue about England taking the mail off of some of our ships.

It is a pity that there is no sort of Red Cross work that impresses upon women the advisability of keeping the buttons sewed on tight.

What is the difference between the two old-fashioned expressions of depth, "over the shoe tops" and "up to the knees"?

They say that the perfect woman is 40. Our acquaintance with women above and below that age tends to substantiate the assertion.

I've read the poems of humorists,
And luffed and luffed and luffed;
I also read one now and then
By Tennyson J. Daft.

If this war will only bring about the prohibition of the sale of whisky and the serving of fruit salad, it will be worth while, no matter what it costs.

If we call the man who won't mix up in the war at all a slacker, what are we going to call the fellow who won't jump into some of its numerous activities until he sees a good, stiff profit for himself?

The Pathe picture people state that life's greatest problem is that of the neglected wife, the erring husband, and the other woman. They have become so concerned over it that they are going to give \$1,000 in real money for the best solution. Here's where we win: Teach her to cook a good, live breakfast every morning, with hot biscuits two or three times a week.

KEEP BREEDING STOCK

With live stock selling at higher and higher prices and with feed going up, many may be tempted to sell their breeding stock. This will be killing "the goose that laid the golden egg." Keep the breeding stock and raise more stock—it will pay. In one great country the farmers sold their sows last year when the pigs were weaned. This year pork is higher in that country, and the farmers have no pigs to sell nor sows to raise more. It would have paid them well to have kept the sows to supply the nation with pork.—Kansas Farmer.

AMONG THE ALUMNI

E. H. Jantz, '16, has moved from Kansas City to Larned, Kan.

Robert Lancaster, '16, has been appointed county agent of Minidoka county, Idaho.

Ross Moorman, '09, is with the Wichita-Oklahoma Serum company, Wichita, Kan.

C. G. Elling, '04, district agricultural agent for southeast Kansas, was in Manhattan Friday.

C. A. Patterson, '14, is county agent for Alfalfa county, Okla., with headquarters at Cherokee.

Miss Esther Bell, '14, who has been teaching this year at Riley, was a college visitor last week.

F. A. Coffman, '14, has gone to Akron, Col., to accept a position with the United States department of agriculture.

Harold Amos, '16, who lost his left hand in an accident in the chemistry building last week, is reported as improving.

A. E. Lawson, '16, field editor of the Rural Spirit, a farm paper of Portland, Ore., was a college visitor for a day last week.

L. A. Alt, '16, is teaching agriculture and manual training in the high school at Little River. He writes that he is well satisfied with his work.

Dr. J. T. Willard, '83, dean of general science in the Kansas State Agricultural college, has gone to San Diego, Cal., where his father is very ill.

Albert J. Mangelsdorf, '16, who has been engaged in the seed business at Atchison, visited in Manhattan when enroute to Fort Riley to enter the training camp.

Mr. L. L. Shaw, '12, and Mrs. Alice (True) Shaw, '12, have moved from Redding, Cal., to Holtville, in the Imperial valley, where Mr. Shaw has gone into the implement business for himself.

Harlan R. Sumner, '16, who has a fellowship in the University of Missouri, visited friends in Manhattan recently. He went from here to Fort Riley, where he entered the officers' training camp.

C. C. Wolcott, '13, M. D. University of Michigan, '17, has been appointed assistant surgeon in the United States navy. He is now located at the naval hospital in Brooklyn, N. Y., where he will remain until he goes to sea.

Miss Ada Billings, '16, writes that she has just closed her year's work as normal training teacher at Centralia. She expects to attend commencement here in June. She will be at home in Vermillion for the summer.

Mr. Ralph Felton, '04, and Mrs. Hattie (Forsyth) Felton, '04, and daughter, together with Ray Felton, '04, and family, motored from their home near Dwight to Manhattan to see the May fete Saturday. They spent Sunday in Manhattan visiting friends.

The board of education and faculty of the Mount Pleasant (Tex.) high school were entertained at dinner recently by the domestic science students under the direction of their teacher, Miss Vergie McCray, '11. The event received extended comment in the local newspapers.

Captain P. M. Shaffer and Mrs. Zepherine (Towne) Shaffer, '11, have returned from a month's leave of absence spent at Huntington Park, Cal. At present Captain Shaffer is under orders to go to Chattanooga, Tenn., for station. Mrs. Shaffer expects to be in Manhattan for a few days before joining Captain Shaffer in Tennessee.

Miss Laura Wingfield, '14, has been appointed, by the North Carolina state home economics division, as home economics agent for Pitt county, N. C. Pitt county covers a large area and is very productive. A part of Miss Wingfield's work will be the organization and supervision of can-

ning clubs in every township of the county.

BIRTHS

Born, to Mr. Oscar T. York, '11, and Mrs. Elizabeth (Aberle) York, '12, Vinland, Kan., on May 15, a son, Raymond Arthur.

MARRIAGES

KEYES-BAYLES

Miss Eunice Keyes and Mr. John J. Bayles, '15, were married at the home of the bride's mother in Manhattan, Saturday noon, May 12.

Mr. Bayles is agriculturist for the Frisco railroad. Mr. and Mrs. Bayles will make their home at Cherryvale.

MANHATTAN ALUMNI

The Manhattan Alumni association of the college will hold its usual Decoration day picnic on the campus at 4 o'clock p. m. May 30. Refreshments will be served. It is hoped that all alumni of the college who can do so will arrange to attend this picnic and bring their families.

EASTERN ALUMNI PICNIC

The Eastern Kansas State Agricultural College Alumni association will hold its annual picnic at Prospect park, Brooklyn, Saturday afternoon, May 26.

The party will assemble at the Lincoln road entrance to the park at 2:30 o'clock in the afternoon. A hearty welcome will be extended to all alumni who may be in the city at that time.

CLASS OF 1914, ATTENTION

All the members of the 1914 class are urged to be present for commencement this year. Take a short vacation, visit dear old Alma Mater, and renew old friendships all at one time. Commence life anew each year by attending commencement and begin this year.

PUBLICITY COMMITTEE,
Elmer J. Bird, Chairman.

IN THE COUNTRY MAGAZINE

Graduates of the Kansas State Agricultural college are authors of several articles in the Country Magazine, University of Wisconsin, for May. Miss Nell Beaubien, '16, who is home economics editor of the magazine, contributes two articles, one on "Milk—Your Friend," the other on "Conserve the food." Miss Beaubien, who studied home economics and journalism here, is taking further work in journalism under Prof. W. A. Sumner, '14, in the University of Wisconsin.

Miss Abby L. Marlatt, '88, is author of an article entitled "Woman's Aid in Conservation." Miss Marlatt is director of the course in home economics in the University of Wisconsin.

ALUMNI AT CORNELL

There are on the faculty of Cornell university, Ithaca, N. Y., four Kansas State Agricultural college alumni. These are: Dr. R. R. Birch, '06, who is superintendent of the experiment farm of the veterinary college; Dr. W. A. Hagan, '15, who is instructor in obstetrics in the veterinary college; L. E. Hazen, '06, who is instructor in rural engineering; and C. C. Hamilton, '14, who is assistant in entomology. Ray Allen, who taught during 1915 and 1916 in the zoology department of the Kansas State Agricultural college, is in the entomology department. A. F. Vass, '09, is a graduate student and will complete his work for a doctor's degree next year. Messrs. Hamilton, Allen, and Hagan are all entered as graduate students in addition to their teaching, the first two for the doctor's degree, while the latter expects to receive a master's degree next fall. Dr. E. M. Dobbs, '16, held a scholarship in the veterinary college during the year, but recently departed to accept a position in the University of California. J. R. Jenness, for several years connected with the physics department in the Kansas State Agricultural college, is a graduate student and assistant in physics.

TO MANAGE DAIRY ASSOCIATION

E. J. Trosper, '10, has resigned his work at Lake City, Minn., to manage the Northeast Missouri Dairy Development association, the work of which covers 25 counties. His headquarters will be at Hannibal, Mo.

The Lake City Graphic-Republican says of Mr. Trosper's work in Minnesota:

"Many big events have been secured here during the past three years that Mr. Trosper has been director of agriculture in the Lake City high school. Among the events and projects that have been brought here might be mentioned the big calf feeding contest that was staged in connection with the colt show here in 1915; the tri-county dairymen's convention in 1915; the State Horse Breeders' convention, last year; the State Dairymen's convention in January this year. He has been instrumental in the organization of associations that have been and will continue to be of great benefit to the farming industry here. Among the associations organized are the Cow Testing association, the Shippers' association, the Alfalfa Clubs association, calf clubs, and others.

"While all are pleased that Mr. Trosper has been selected to manage this new big project in Missouri and all know that he will make good in his new field of labor, those who have been brought in touch with his work here are sorry to see him leave this section where he has done so much."

EASTERN ALUMNI ACTIVE

The Eastern Alumni association, Kansas State Agricultural college, is taking an active interest in the big food drive incident to the war. The association recently adopted the following resolutions:

"We, the Eastern alumni of the Kansas State Agricultural college, being at the consumer's end of the line, perhaps appreciate more keenly the present and pending food situation than those more fortunately situated at the source of supply.

"Be it therefore resolved, that we request the college faculty to so impress upon the student body the urgency of action, to meet this worldwide food crisis, which will exist during the coming year whether the war continues or not; that they each in turn may carry the message home to the farm and be inspired to do their full share in stimulating the production and conservation of human food.

"Be it further resolved, that we fully endorse the suggestions made by President Waters at the St. Louis conference as reported in the Eastern papers and also do publicly approve the idea of graduating at the earliest possible date, sections of the senior class taking the agricultural course, and further recommend that lower class men who volunteer to return to the farms for spring work be released at once and given full credit for the term's work. We are fully alive to the great opportunity Kansas with her wonderful productive capacity and the college as a directing force have to help meet this great problem.

"Be it further resolved, that the secretary be and hereby is instructed to transmit a copy of this resolution to President Waters with the request that it be brought to the attention of the faculty and if thought advisable, be given publicity by being read and commented on in chapel or by publication in the college paper."

IT DOES NOT PAY TO FEED THE LICE ON \$15.50 HOGS

Preservation of Health of Hog Is of Utmost Importance

Every precaution should be taken to keep hogs in good health. It does not pay to feed lice on \$15.50 hogs, points out Carl P. Thompson, specialist in animal husbandry, division of extension, Kansas State Agricultural college.

Spray hogs with crude oil or hog dip as often as they need it, urges Mr. Thompson. Germs that cause scurf, pug nose, and white scours, are found in the sleeping quarters. Clean out and disinfect every hog shed.

WHEN HENS PAY BEST

TIME DEPENDS ON PURPOSE FOR WHICH THEY ARE KEPT

Commercial Plants Follow Forcing Method, Which Gives Heavy Production for Single Season—Not Adapted to General Farm

The age at which a hen is most profitable for egg production depends largely on the method of feeding and the purpose for which the bird is kept, in the opinion of N. L. Harris, superintendent of the poultry farm at the Kansas State Agricultural college.

"If the object is heavy egg production, without expectation of using the bird for a future breeder, the forcing method is adopted," said Mr. Harris. "By this method the hens are kept in a small yard or house, and are given a ration which is high in egg producing elements. By this method the reproductive system is worked to its highest capacity.

AIM IS IMMEDIATE PRODUCTION

"It is seldom that a bird will be able to stand up under such feeding conditions for more than one season. This system of forcing is followed by large commercial egg plants, the object being to get the greatest possible income from the hens in the shortest time.

"The forcing habit has given rise to the statement that the pullet year is the most profitable of the life of the hen. As the great majority of hens are kept on general farms, where the production of eggs is merely a side line, forced feeding is not practical, the general plan being to allow the hens free range, and feeding them so as to produce only the normal amount of eggs.

MANY EGGS IN SECOND SEASON

"Cared for in this way, hens of the small egg breeds will produce nearly, but not quite, as many eggs the second season as the first. Those breeds which have a tendency to put on fat readily, usually become unprofitable the second year.

"Hens that are to be kept as breeders, should never be given highly concentrated feeds. If this is done, the hens will not be in a good physical condition to produce the best of chicks."

NOW IS TIME FOR EDUCATION TO MAKE GOOD, SAYS ROSS

Superintendent of Public Instruction Urges School People to Push Food Drive

"Now is the time for educational theory to make good," declares W. D. Ross, state superintendent of public instruction, in a letter urging boards of education, superintendents, and school teachers to take an active part in the big food drive in Kansas.

Superintendent Ross urges aid particularly in the forming of chicken, pig, and canning clubs, and advocates that domestic science teachers and equipment be placed at the disposal, not only of the canning clubs, but of the women of the communities.

Work may also be done by school authorities, Mr. Ross points out, in cooperating in the movement to plant all available acres, to tend the growing crops properly, to harvest carefully, and to preserve all perishable food products by drying or canning them. Discouraging the sale of immature live stock to be butchered and encouraging rigid economy in the use of staple foods, are other services which educators can perform in the interest of greater production and conservation.

SORGHUM CROPS HAVE GREAT ADVANTAGE IN MAKING SILAGE

Experimental Work in Kansas Shows Big Acre Yield for this Purpose

Sorghum crops have a great advantage for silage. This is the statement of the dairy committee, Kansas council of defense, which further points out the importance of silage in feeding dairy cattle.

Experimental work in the last few years has shown that corn is a little better for silage, ton for ton, than are the sorghum crops, but when the yield

is considered the sorghum crops are found much better than the corn. In cooperative work carried on on farms in eastern Kansas during the past three years it has been found that Kansas orange sorghum has given a yield of 13.5 tons of silage per acre; kafir 9.1 tons; corn only 7.5 tons. This is the result of 15 tests.

The average silo in Kansas has a capacity of about 125 tons. Only 9.5 acres of sweet sorghum will be required to fill a silo of this size, while 16.5 acres of corn would be needed. The average silo can be filled with 14 acres of kafir.

MONDAY IS JONAH DAY FOR MANY WORK HORSES

Overfeeding Sunday Often Is Cause of Serious Disorders, Says Dr. C. W. McCampbell

More work horses are sick on Monday than on any other day in the week. This is good evidence that something is often wrong with the method of feeding on Sunday, declared Dr. C. W. McCampbell, associate professor of animal husbandry in the Kansas State Agricultural college.

"One form of illness to which the work horse is subject occurs so often just following the Sunday rest that it is popularly known as 'Monday morning sickness,'" said Doctor McCampbell. "This trouble is noted most frequently in those cases where horses are working hard, require heavy feeding, and are given the regular feed on Sunday while they remain idle in the barn. This is a serious disorder often resulting in death.

"Another common disorder among work horses on Sunday and Monday is colic. In most cases it is caused by heavy feeding while idle, but it may be caused by a cold, sloppy bran mash which is a sure trouble maker. A warm steamed bran mash to which a liberal amount of salt has been added is often beneficial.

"When the horse is working hard his Sunday feed should be of the same kind and quality as that which he receives on other days, but the grain portion of the ration should be reduced one half. If a small pasture is available and the grass is not too plentiful it would be well to allow him to spend the day there, especially if he can have access to shade."

Extension Workers Busy

Three state mother-daughter canning clubs have been organized in Wilson county, with a total enrolment of 55 teams.

R. M. Sherwood, acting head of the department of poultry husbandry, held a poultry school at Neodesha Thursday and Friday.

T. H. Parks, specialist in entomology in the division of extension, spent Wednesday and Thursday assisting J. D. Lewis, county agent in Nemaha county, in his spraying work.

Otis E. Hall, state club leader, is giving a three-day canning demonstration at Wichita under the auspices of the Wichita Eagle. Many requests for this kind of help are being received by the division of extension of the agricultural college.

C. P. Thompson, specialist in animal husbandry, and Miss Eula Butzerin, temporary assistant in home nursing, division of extension, spent last week doing community work at Dundee. Otis E. Hall, state leader of boys' and girls' club work, gave a canning demonstration at this assembly Wednesday.

Two thousand women attended canning demonstrations given in Topeka by Miss Marion P. Broughton of the division of extension of the agricultural college. H. B. Wilson, city superintendent of schools, reports already much evidence of the good accomplished through these demonstrations, which were held in the school buildings.

Dr. J. E. Kammeyer, professor of economics, delivered the commencement address at the Kansas City (Kan.) junior high school last evening. He will give the commencement address at Garrison Friday evening.

SCIENCE TO AID NATION

DOCTOR COULTER POINTS OUT SERVICE GIVEN IN EMERGENCY

Noted Botanist in Annual Phi Kappa Phi Address Shows Part Played by Research in Solution of Important Problems

That science is being called upon as never before to help this country meet a great emergency, was the assertion of Dr. John M. Coulter, professor of botany in the University of Chicago, founder and editor of the Botanical Gazette, and member of the national council of research recently appointed by President Wilson. Doctor Coulter made the annual Phi Kappa Phi address at the Kansas State Agricultural college on, "Science and the Public Service."

"Our government recognized the importance of science a year ago when the national research council was appointed," said Doctor Coulter. "To this council have been referred problems the various departments of the government have encountered. The government realizes that although science may be called upon for such service in an emergency, its real service is much more fundamental and permanent."

KEEP SCIENCE'S TORCH AFLAME

"Nowhere are the ideals of science higher and more nearly realized than in this country. We are no longer the pupils, but the colleagues of our foreign brethren. American science is competent to keep the torch of science aflame."

"To extend the boundaries of human knowledge is the first service of science. It sets up as its goal the understanding of nature. Nature may be likened to a great masterpiece enjoyed by those who appreciate what it means."

LIKE UNEXPLORED CONTINENT

"Science may be likened to a huge unexplored continent whose secrets are gradually discovered. This general exploration of the unknown was once appreciated more than it is now. The tide has turned, however, and exploration in science is coming into its own again."

"The change of attitude in the scientific work of the government indicates this significantly. The bureau of plant industry in the department of agriculture, for instance, has been adding to its staff scientific explorers during the last few years. The reason for this has been the realization of the fact that practical application is sterile unless there is a continuous discovery of something to apply."

MODERN COOPERATION IN RESEARCH

"This shift in the attitude of a government bureau indicates a shift in the attitude of the people who through their representatives permit such work. This attitude of the government is expressing itself also in the development of agricultural experiment stations from schools for apprentices to schools of science."

"Cooperation in research is the scientific slogan of today. We are moving rapidly toward the time when every man who has the ability to explore shall have the opportunity. In other words, this country is entering upon its second period of exploration, this time not of territory but of nature."

RESPONSE TO HIGH IMPULSE

"Scientific exploration is a luxury, in one sense, just as is music or art or literature, and must be recognized in the same way as a response to a high human impulse—the impulse to know, the impulse which is developing the human race into greater intellectual efficiency."

"To apply the results of science to human welfare is the second service of science. This has been called 'applied science,' the science of our first ideal being distinguished as 'pure science.'"

"Pure science is often immensely practical and applied science is often very pure science. There is no dividing line."

TRAINED INTELLECT IS NEEDED

"The physical needs of man, great as they may be, must never obscure the intellectual needs of man, because

the trained intellect is the speediest agent in meeting physical needs. On the other hand, the intellectual needs of man, noble as they may be, must never lose sight of the fact that the speediest results are obtained by the enormous increase of experimental work under the pressure of physical necessity."

"To develop a scientific attitude of mind is the third service of science. It sets up as its goal a more effective citizen, and expresses itself in the results of science in education. The scientific attitude of mind is nothing more than trained common sense."

KNOWLEDGE IS FIRST HAND

"Any peculiar result of science in education must be obtained not through information in reference to the facts of science but through contact with the materials of science. Information can never be regarded as a substitute for knowledge. Information is always at least second hand, while knowledge is first hand."

"To summarize the whole situation, the service of science is first to understand nature that the boundaries of human knowledge may be extended; second, to apply this knowledge to the service of man that his life may be fuller of opportunity; and third, to use the method of science in training man so that he will be able to solve his problems and not be their victim."

"Such results suggest that science through exploration, through practical service, and through education, is to be regarded as the most important factor in developing a nation."

MEN AND CHILDREN MUST MEET ECONOMY PROBLEM

Activities of Housewife Alone Will Not Insure Thrift, Points Out President Waters

If the men and the children of the household won't eat plain food and be happy there's no use in talking to the woman of the house about food economy. This is the message sent out by the Kansas council of defense.

"The farmer is doing everything in his power to keep production at the point of safe living and safe fighting," commented Dr. H. J. Waters, president of the council, today. "If his efforts are to count, however, he must have the cooperation of the home. We cannot be extravagant in our households and expect the farmer still to furnish enough food to supply us and our allies."

"It is not through the activities of the housewife alone that we are going to have economy. Fully as much depends on the head of the family and the children. If they are dissatisfied, the housewife will try to satisfy them without paying any further attention to economy. They must take a part fully equal to that of the housewife in practicing and encouraging food thrift."

MAKES MANY SUGGESTIONS TO PROMOTE FOOD THRIFT

Committee of Defense Council Urges Sensible Methods of Economy

Don't eat too much.

Don't prepare or serve too much at a meal.

Don't let food spoil in cooking or in any other way.

Care for all food properly.

These are the four commandments set forth by the committee on utilization and economy, Kansas council of defense, in the big food drive of the world war.

Thrift—one of the big essentials in war time—will be promoted, say the home economics specialists, if the housewife will divide foods into five groups—fruits and vegetables, meats and meat substitutes, foods rich in starch, foods rich in fat, and sugar. Food from each group should be used in the meals every day.

Meat substitutes include eggs, cheese, milk, peas, beans, and nuts, and are worth using extensively. Cereals and potatoes are rich in starch. Among foods rich in fats, the home economists suggest butter, cream, lard, salt pork, bacon, and salad oils. Sirups, honey, and sweet cakes add sugar to the diet.

SIRUP INSTEAD OF SUGAR

SORGHUM PRODUCT MAY BE USED AS PARTIAL SUBSTITUTE

Varieties of Crop Ordinarily Grown in State May Be Employed for this Purpose—Eight to 30 Gallons from Ton

With the price of sugar soaring, sorghum sirup—or "sorghum molasses" as it is commonly called—is a possibility as a partial substitute. If a sorghum mill is available, the product may prove profitable to the Kansas farmer, in the belief of the committee on agricultural production, state council of defense.

The varieties of sweet sorghum ordinarily grown in the state can be utilized for sirup. The varieties best adapted for this purpose are the orange and early strains of sumac in eastern Kansas and the western orange and red amber in the western part of the state. Black amber is not so satisfactory, but may be the only one available.

IS GROWN LIKE CORN

Sorghum for sirup production is planted and cultivated in practically the same way as corn. In eastern Kansas surface planting or planting with a furrow opener attached to the planter gives better results than listing, while the latter method is preferable in central and western Kansas.

The proper time to plant sorghum is about 10 days after the best time to plant corn. Sorghum for sirup should be planted thinner than for forage or silage. For best results the plants should be five to seven inches apart in the row.

STALKS MAKE BEST SIRUP

Sorghum for sirup should be cut when the seed is in the late milk or the dough stage. The best grade of sirup is obtained when the leaves, heads, and suckers are removed and only the main stalks used. When this practice is followed the work must be done by hand. Large commercial factories, however, do not remove the leaves before crushing.

A ton of sorghum will furnish from 700 to 1,200 pounds of juice, from which eight to 30 gallons of sirup may be made, depending on the sugar content of the juice. The production of the sirup per acre will vary from a few to as much as 300 gallons, depending on variety grown, season, soil, and method of growing and manufacturing.

TO TRAIN HIGH SCHOOL BOYS FOR FARM WORK

Manhattan Youths Already Signed Up for Instruction in Practical Agricultural Operation

To train the high school boys of the state for farm work is the plan of the engineering division, Kansas State Agricultural college.

Laborers cannot be obtained readily from sources outside the state this year as has formerly been the practice. There are, however, hundreds of high school boys in the state old enough to do farm work if they but knew how. It is the plan to instruct these boys in practical farm work. The Manhattan boys are to receive first instruction and 30 have thus far signed up for the work.

Land has been obtained where actual operations will be carried on. Instruction is to be given with all the more common machines. These machines are to be furnished by the department of farm machinery. The boys will be taught how to harness and handle horses, operate machines, and do other farm work. Those who have had experience with motor cars will receive instruction in the operation of tractors.

REDUCTION OF MEAT BILL IS STEP IN FOOD THRIFT

Defense Council Committee Continues Drive Against Waste in Household

Reduce your meat bill. That is one of the steps in thrift advocated by the committee on utilization and economy, Kansas council of defense.

Here are suggestions, some of which may be put into practice, the commit-

tee believes, by every housekeeper:

Meat substitutes may be used, such as eggs, cheese, milk, peas, beans, and nuts.

Do not buy meat until you have bought one pint of milk a day for each member of your family.

A dozen eggs are worth as much in the dietary as two pounds of meat.

Waste in meat, the committee points out, may occur in leaving the trimmings at the market; in throwing away fats that could be used in frying, shortening, or soap making; in throwing away bones that could be used in making soup; and in not using the left-overs.

KEEP SPARE PARTS FOR GAS TRACTOR ON HAND

To Keep Engine in Harvest Field Is Important—Going to Town for Repairs Takes Time

Spare parts for the gas tractor should be kept on hand at all times, suggests W. H. Sanders, instructor in farm motors in the Kansas State Agricultural college. The gas tractor must be repaired quickly and loss of time should be reduced to the minimum.

To keep the engine running is the main thing in the harvest field, pointed out Mr. Sanders. Going to town for repairs takes time which can be avoided by having spare parts at hand. Spare parts of pieces which wear the most should be carried with the tractor in order to save time in replacing parts.

Cylinder oil for the gas engine must be of the best quality and highest grade to get the best results from the tractor. A cheap low grade of oil will cause frequent stops and delays and will seriously interfere with the efficiency of the engine.

Overhaul the tractor at least once a week, and every three days if run continuously day and night. To delay one day may result in a broken part which will take longer to repair than the time required for overhauling the engine.

SEVENTH ANNUAL MAY FETE PROVES DECIDED SUCCESS

Four Hundred Students Participated in Elaborate Event

The seventh annual May fete of the Kansas State Agricultural college was presented by 400 students on the college campus Saturday afternoon, under the direction of Miss Anne Cahoon and Miss Ethel Loring of the department of physical training. The fete was in the form of an entertainment by Robin Hood and Maid Marion in Sherwood forest.

Miss Agnes McCorkle of Holton, senior in domestic science, was the queen, and was led to her throne attended by Miss Pauline Richards of Delphos, Miss Grace Lightfoot of Manhattan, and Miss Esther Charles of Republic.

After the crowning of the queen came the wood nymphs, then the commoners, followed by the courtiers, trumpeters, village folk, jesters, archers with bows and arrows, flower girls, milk maids, and hobbyhorses, all subjects of the queen of May. At the close of the May pole dance by the college literary societies came a pleasant surprise. Old Glory was unfurled, giving the fete a climax that was appreciated. The dance of the flower girls was especially graceful. The archers with their bow and arrow dance made a most pleasing spectacle.

The costumes worn by the players, which were unusually attractive, were designed by Miss Florence Hunt, assistant in domestic art.

IT'S TIME TO GET CANNING OUTFITS STARTED TO WORK

Don't Waste Surplus Rhubarb, Asparagus, or Greens, Warn Specialists

Canning outfits should be put into operation without delay. Rhubarb, asparagus, and greens are now ready for use. All of these will taste good next winter, and surplus quantities should not be wasted.

Full instructions for the canning of these vegetables is obtainable from the division of extension in the Kansas State Agricultural college.

WAGES WAR ON PESTS

LADY BIRD BEETLE DESTROYS INSECTS IN GARDENS

Eggs of Colorado Potato Beetle, and Plant Lice Are Devoured in Large Numbers by this Friend of Man

Protection of the lady bird beetles in home gardens will tend towards increased production, points out George A. Dean, professor of entomology in the Kansas State Agricultural college.

"The lady bird beetles, common throughout Kansas, are efficient insect pest destroyers," said Professor Dean. "They are now eating the eggs of the Colorado potato beetle on the potato plants and later will devour plant lice on other garden truck, such as peas, lettuce, cabbage, and cucumbers. These beetles also search for scale and plant lice on the branches and leaves of fruit and shade trees. In both the adult and larval forms the lady bird beetles are voracious feeders."

BEETLES ARE CONSPICUOUS

The adult beetles are short, generally hemispherical or oval, convex above with under side flattened, so that legs may be drawn up under wing covers. Usually they are rather conspicuous, being from one-eighth to one-fourth inch in length and either red with yellowish or black spots on the wing covers, or black with red or yellowish spots. The Colorado potato beetles are striped, while these beetles are spotted, so there should be no mistake in identifying them.

"The larvae of these beetles are heavy feeders and they should not be destroyed as they do a great service in destroying harmful insects," said Professor Dean. "They are short, flattened, rather broad with small head and long legs, usually have prominent spines or hairs and are generally found wherever plant lice abound."

BEETLES AID IN CONTROL

"There are several species of lady bird beetles, many of which are numerous. There is no question but that these beetles are helpful in the control of injurious insects on garden and staple crops. On the other hand it is not wise to depend upon these insects for the control of pests and thus neglect to put into operation practical methods of control, such as spraying. The person who trusts to providence to keep his insect pests in check will often lose a large part of his crop."

GLENWOOD MOTHER-DAUGHTER CLUB IS BEST IN COUNTRY

Government Has Placed Stamp of Approval on 1916 Work

The Glenwood Mother-daughter Canning club of Glenwood Springs has been adjudged the champion mother-daughter club of the country by the United States department of agriculture. It is being considered for first honors for 1916 club work in all branches.

"We are ready to report that the champion mother-daughter club in the United States is the Glenwood club of Leavenworth county, Kansas, but we are not quite ready to report that this is the best club when all projects are taken into consideration," writes O. H. Benson of the department. "It is the most effectual mother-daughter home canning club in the United States, from the standpoint of home canning achievement, community effort, and community work."

Thousands of corn clubs, pig clubs, canning clubs, and other agricultural clubs conducted cooperatively by the department of agriculture and the agricultural colleges in the many states, competed for this honor. The Glenwood club of 29 teams, canned more than 10,000 quarts of fruits, vegetables, and meat during the year, and in addition did much constructive community work.

Otis E. Hall, Manhattan, is the state club leader for Kansas. Many mother-daughter canning clubs have been organized in Kansas this spring and new ones are being added to the list every day.

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NEW BOARD IS NAMED

WILL GOVERN EDUCATIONAL, CHARITABLE AND PENAL INSTITUTIONS

Governor Capper Is Ex Officio President—Dr. Wilbur N. Mason, Former Governor Edward W. Hoch, and Charles W. Green Appointed

Dr. Wilbur N. Mason, president of Baker university; Edward W. Hoch, former governor of Kansas; and Charles W. Green, former mayor of Kansas City, Kan., are the three appointive members of the new board of administration. They were appointed this week by Governor Capper, who himself under the law is president ex officio of the board.

The board will have the largest responsibilities of any administrative body ever named in Kansas. On July 1 it will take charge of the work now done by the board of administration, the board of control, and the board



EDWARD W. HOCH, MEMBER OF PRESIDENT BOARD OF ADMINISTRATION, APPOINTED TO NEW BOARD

of corrections. Under its supervision will be the educational, penal, and charitable institutions of the state.

RESIGNS PRESIDENCY OF BAKER

The board will select a business manager, or purchasing agent, for the institutions.

Doctor Mason has resigned the presidency of Baker university to undertake the new work. He holds degrees from Ohio Wesleyan, Boston, and Harvard universities, and from the University of Chattanooga. For some years he was in the active Methodist ministry, being pastor of churches in Ohio, Massachusetts, and Tennessee. He became president of Baker university in 1911, and has become widely and favorably known as an educator.

LONG PROMINENT IN KANSAS

Governor Hoch is one of the best known men in Kansas. He has lived in the state more than 40 years, during most of which time he was editor and publisher of the Marion Record. He was twice a member of the house of representatives of the legislature, and from 1905 to 1909 was governor of Kansas. He has served on the board of administration in charge of the state educational institutions since its establishment, having been appointed by Governor Hodges and reappointed by Governor Capper. He is widely known as a lecturer.

Charles W. Green is a highly successful business man of Kansas City. He has always been active for the best interests of his city, the largest in the state, and for several years was mayor. He has taken a leading part in a large number of movements for civic betterment.

CANDLE EGGS AND PREVENT LOSS IN MARKETING THEM

Plan Would Be Profitable to Kansas Farmer, Says Superintendent Harris

That it would pay the Kansas farmer to candle eggs, is the opinion of N. L.

Harris, superintendent of the poultry plant at the Kansas State Agricultural college.

"During the hot weather it is an advantage to the farmer to candle the eggs for two important reasons—to avoid selling eggs that may have become spoiled from lying in the sun or being gathered from stolen nests, and to satisfy oneself, that the merchant to whom he is selling is justified in the return of eggs.

"One of the most satisfactory and least expensive methods is to make a roll or tube of common brown paper, which should be 12 inches long and the size of the egg in circumference. Place one end of the tube so that the sun can shine on the egg. With this device one can distinguish the spoiled eggs from the good ones.

"By observing the size of the air cell in the end of the large end of the egg, it is possible to determine the age of the egg or the length of time it has been allowed to evaporate. If this simple method is followed there is no reason why there should be a loss when the eggs are marketed."

COMMENCEMENT ADDRESS BY PRESIDENT THOMPSON

Head of Ohio State University for Many Years—Bishop Wise to Deliver Baccalaureate Sermon

Dr. William Oxley Thompson, for nearly 20 years president of the Ohio State university, will deliver the commencement address at the Kansas State Agricultural college June 21.

Doctor Thompson has been president of the Ohio State university since 1899. For eight years previous, he was president of Miami university. He is well known as an educator and a speaker.

The Right Rev. James Wise, bishop of Kansas, Episcopal church, will deliver the baccalaureate sermon on Sunday, June 17. His subject will be, "The Foundations of Life."

Though born abroad, Bishop Wise has spent most of his life in the middle west. He received his scholastic training in the University of Nebraska and the General Theological seminary. He has given special study to religious education.

HOME ECONOMICS WOMEN IN PATRIOTIC ACTIVITIES

College Girls Hold Mass Meeting to Answer Question, "What Can I Do?"

Students in the division of home economics in the Kansas State Agricultural college will do their bit in patriotic service. Willingness to assume additional responsibilities was expressed by girls in attendance at a mass meeting called to help individuals answer the question, "What can I do?"

The girls were urged to help solve such important problems as food conservation and public health. Many of them are expected to organize and teach classes in home economy and other subjects next summer in local communities of the state. Seniors who will be graduated this spring will be in a position to continue the good work throughout the entire year.

Classes for leaders are being organized this week. The subjects include food preparation, home dietetics, food preservation, household management, conservation of health, home nursing, economics, and hygiene of clothing.

Guesswork hardly ever hits, and the careful farmer will not depend on it. This is a year when a mistake will mean a greater loss than ever—a year that should be free from experiments. The wise farmer will therefore get into touch with his county agent, state experiment station, and any other agency of better farming that offers itself and will avoid every mistake possible.—Progressive Farmer.

WHAT MAKES FARM PAY?

IT'S BUSINESS JUDGMENT OF OPERATOR, ANSWERS ECONOMIST

With Present High Prices of Land, Man Cannot Disregard Fundamental Principles and Make Living for Self and Family

The object of present day farming is to gain a profit for the farmer. The possibility of obtaining this profit depends largely upon the business judgment of the farmer, his choice of enterprises and his understanding of market prices and conditions, in the opinion of Theodore Macklin, in charge of agricultural economics in the Kansas State Agricultural college.

"There was a time when, because of cheap land, it was relatively easy to disregard business principles and make an apparently good living," said Professor Macklin. "In recent years, with rapidly rising prices of farm products and enormously enhanced values of land in the face of unprecedented mining of soil fertility, it is no longer possible for the unbusiness-like farmer to make a sufficiently good living in farming."

FARMING ON LOW MARGINS

"We have reached a period in American agriculture which forces the farmer to conduct his business on extremely low margins. Every slight change in price levels may easily wipe out the expected profit."

"Because of this fact, now as never before, the young man who would be a successful farmer, by making his living out of profitable farming instead of the old method of profiting by the speculative rise in land values, must earnestly improve his ability as a manager. The problem of becoming an efficient business farmer consists of learning how to solve the problem of relative profitability of farm enterprises and marketing under the conditions in which his farm is situated."

MUST INTERPRET MARKET

"He must, therefore, be skilled in interpreting the trend of market prices and the stability of these prices, in choosing crop and live stock enterprises, and the method of disposing of these crop and live stock products. This emphasizes not only the value of experience but also the necessity of supplementing his judgment by reliable figures and facts, which show him the trend and conditions of his own farm business."

"The farm is one of the most complex of modern businesses. It requires the highest efficiency of men and women to farm profitably and at the same time maintain the fertility of the soil."

TO RAISE MORE SHEEP IS PATRIOTIC SERVICE

State Is Especially Adapted to Mutton and Wool Production, Says Animal Husbandry Specialist

That the farmers of Kansas can do nothing more patriotic than raise more mutton for food and more wool for clothing, is the opinion of A. M. Paterson, instructor in animal husbandry, Kansas State Agricultural college.

"Kansas should have at least 1,000,000 breeding ewes, which should produce 1,000,000 lambs each year," said Mr. Paterson. "If the lambs were marketed when they weigh 75 pounds, it would make approximately 40,000,000 pounds of meat. This number of ewes should shear 8,000,000 pounds of wool."

Kansas has approximately 58,000,000 acres of land. There were 181,481 sheep in the state March 1, 1916, or only one sheep to every 320 acres, according to the Kansas state board of agriculture.

"Kansas is especially adapted to the production of sheep," said Mr.

Paterson, "because of the abundance of pasture, the open winters, the comparative freedom from parasitic diseases of sheep, and the enormous amounts of rough feeds which go to waste annually."

"People are rapidly learning that mutton is the most delicious, nutritious, and healthful of all meat. This growing appreciation is creating an insistent demand, which, together with the decrease in production, has made prices high and has opened new opportunities for profitable sheep husbandry on the average Kansas farm."

"Formerly sheep production was largely a range industry but since the ranges have been so materially reduced, it is becoming more and more a part of the business of the general farm."

KANSAS WILL RAISE TWO TO THREE NORMAL CROPS

Garden Stuff this Year Will Equal Several Ordinary Annual Yields, Says Governor Capper

That between two and three times the ordinary quantity of garden stuff will be raised in Kansas this year, is the prediction of Governor Arthur Capper. Letters to the governor, a trip through part of the state, and visits to a number of public schools, have convinced him that the campaign for greater production is bearing practical fruit.

Governor Capper is especially gratified at the response made by boys and girls to his appeal to the school pupils of the state to help in the big food drive.

"Boys and girls are working in gardens all over the state," commented the governor. "They seem enthusiastic over the fact that they can do their bit for the nation in the great emergency confronting it. In all the schools that I have recently visited, the teachers and the pupils expressed their gratification that they have an opportunity to perform a service of real importance, such as will perhaps not come again in a lifetime."

ONION THRIPS DOES HARM TO MANY KANSAS GARDENS

Field Badly Affected Will Be Worthless Unless Methods of Control Are Applied

The onion thrips is now at work in many gardens and onion fields, according to reports made to the state council of defense. Onions grown from seed are the most severely attacked.

The damage caused by this insect consists of chafing the epidermis from the green leaves, causing them to dry, whiten, and die. Fields badly affected are rendered worthless unless control measures are adopted.

A contact spray is used to combat the thrips. A good one may be prepared by dissolving eight teaspoonfuls of nicotine sulphate in six gallons of water and adding a piece of soap about the size of a walnut. The soap should first be dissolved in warm water.

If smaller quantities are to be prepared for the home garden the nicotine sulphate may be added at the rate of one to two teaspoonfuls to the gallon.

To obtain the best results the spray must be applied with pressure so as to reach thoroughly the insects hiding in the axles of the leaves. A bucket pump may be used for this purpose in a small garden.

The thrips is a very small insect, $\frac{1}{16}$ of an inch in length when full grown. It is light yellow in color and exceedingly active. Its presence on the plants is detected by the appearance of white spots on the leaves and the subsequent drying out of the tissues. Spraying should begin as soon as the insects are observed.

CAN'T DUPE THE FARMER

ADVERTISING WRITER MUST CONSIDER PROSPECT'S INTELLIGENCE

Big Possibilities Exist in Proper Development of Rural Market, Points Out Charles C. Younggreen—Conditions Differ from Those of Cities

That the successful writer of advertising copy for farm papers can't put just any old thing over on the farmer, was the assertion of Charles C. Younggreen of Topeka, general manager of the Kansas Farmer, in an address Tuesday on "Writing Farm Paper Copy" before students in industrial journalism in the Kansas State Agricultural college.

"You must talk to the farmer in his own language—from his own standpoint," said Mr. Younggreen. "You must have a proper regard for his integrity, for his broadmindedness, and for his intelligence. You must put him in the business man's class and forget forever, the hayseed that is so frequently the subject of the comic picture and the joke artist."

DEPENDS ON PURCHASING POWER

"The success of all advertising depends upon purchasing power. The average city man is practically limited as to his income and all the persuasive power in the world is useless if one cannot show him how to increase his income so as to purchase the product. There is not one farmer in the United States whose income is limited. It is easy for the farmer to increase his production to provide the money necessary to make any legitimate purchase."

"In serving the farm population by writing copy that will develop the farm market, one has a far greater possibility than has the man who tries to create sales amid the sordid corruption of the metropolitan market."

COPY DIFFERS WITH PURPOSE

It is impossible to write one piece of copy that fits into the requirements of all business conditions, pointed out Mr. Younggreen. Some products require large copy, some small. It is necessary to use a different argument in different classes of papers. The advertisement that would be effective in a medium of national circulation would often be out of place in a state farm paper or a local daily.

An advertisement that might be successful in Kansas might be altogether ruinous in Maine or California. One can use many an argument with the farmer that would not in any sense interest the city people, and vice versa.

CAN'T APPLY FIXED RULES

"No set rule can be applied to every piece of advertising copy," continued Mr. Younggreen. "What can be done depends upon the conditions governing the individual case, and the real ability of the copy reader in his being able to correctly analyze the necessity of the individual."

"It is just exactly the same as in any other pursuit. The minister preaches a different sermon in Kansas City or Topeka than he would if he were addressing a congregation of Kansas farmers—not that there is any difference in their intelligence, but that there is a wide difference in their general habits and their general ideas of life."

"The science of constructing successful advertising is to be regarded just as highly as religion, law, or medicine. The man who makes a success of it must have the ability to treat the individual according to the requirements of the individual. In writing farm copy one must have a proper understanding of what the real farmer is, how he lives, and what he wants."

P. E. McNall, assistant in farm management in the division of extension, was in Emporia Friday and Saturday on farm demonstration work.

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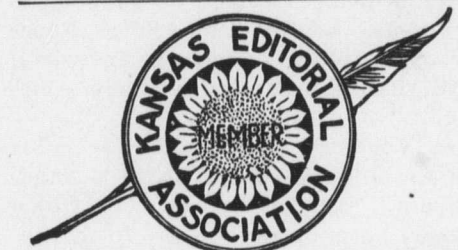
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ADA RICE, '95, M. S. '12.....Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

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WEDNESDAY, MAY 30, 1917

A PROGRESSIVE BOARD

The appointment of Dr. Wilbur N. Mason, Edward W. Hoch, and Charles W. Green on the new board of administration will be generally pleasing to friends of higher education throughout the state. The entire board, including Governor Capper, consists of men who have taken always a vital interest in educational problems.

The reappointment of Governor Hoch will be met with hearty commendation, particularly, among faculty and students of every state institution of learning as well as among men and women everywhere who know his marked ability, his genial personality, and his courageous support of high standards of thought and conduct under all circumstances. Having served already for four years on a board in charge of the state schools, Mr. Hoch will be able to give valuable counsel on all the educational matters which come before the new board.

Doctor Mason is an educator of wide reputation, and his successful administration of Baker university has shown his ability in handling large executive problems. Governor Capper was for several years a member and part of the time president of the board of regents of the Kansas State Agricultural college, and in spite of his extensive business interests always found time to devote to the welfare of the college. Mr. Green has taken a deep interest in the school system of Kansas City and in educational matters generally, and his marked success in business and as chief executive of the largest city in Kansas gives him very special qualifications for promoting business efficiency as well as sound education in the institutions of Kansas.

A board of this character, genuinely interested in education, is bound to be of incalculable value to the state in carrying out large, constructive plans for putting Kansas in the forefront of progress in higher education.

A HANDSHAKE

On many occasions my estimate of a man has been lowered by the lifeless cling of his fingers as we were introduced. If a man isn't going to strengthen his personality by a firm, manly clasp of the hand, why go through the motion at all? Don't form the habit of just sticking your hand out in a formal loose clasp every time. If you do have such a habit and can't break it, for the sake of your own intentions, put on a pair of gloves.

The man who can't give a good, strong, firm, steady grip, and look you in the eye at the same time, has a serious fault somewhere. And, believe me, the man who judges men will put him in the class of the abnormal and unreliable. Probably you have never thought of the importance of this or else you have become careless. Take

note now and strengthen your character and impressiveness by a good impression in the palm of the hand of the other fellow.—Southwest Standard.

RULES FOR POULTRY SUCCESS

The following rules for the use of poultry clubs are valuable for the farm woman also:

1. Select such pure breeds as are good layers, and produce large eggs.
2. Give them the best possible care, food, and shelter. Provide dry, clean, vermin-proof nests.
3. Sell, kill, or confine all male birds, as soon as the hatching season is over.
4. Gather the eggs twice daily.
5. Store the eggs in a dry, clean, cool place, and protect them at all times from heat.
6. Sell only the large and clean eggs.
7. Market the eggs at least twice a week.
8. Sell for cash, on a basis of size and quality.
9. Use an attractive package.
10. Combine shipments as a matter of economy.—Progressive Farmer.

GROW SORGHUMS FOR GRAIN

We cannot refrain from again calling attention to the possibilities of greatly increasing our grain production by growing grain sorghums. A good many farmers over the state have made marked success in growing these crops for grain production. The trouble has been that in too many cases grain sorghums have not been given a fair chance. But in spite of the fact that they have been given such scant attention, they have made good as revenue-producing crops. These crops, including kafir, milo and feterita, are very resistant to dry weather and in most seasons will make profitable yields even though corn may be a failure in the same localities.

These grains can be used for human food. In the making of breads and puddings and mush they are fully comparable with corn in nutrient value. They have not been used for this purpose, however, very extensively in the United States, although greater interest is being taken in recent years to directing the attention of the people to their value for human food. In the present emergency the chief value of the grain sorghums will be as feed for live stock and poultry. If used in this way they will release for use as human food large quantities of the more common food grains now fed to animals.—Kansas Farmer.

LIVE AT HOME

War is an evil and is always to be entered into on only such grounds and for such causes as have been stated by President Wilson. But many benefits may really result from war. Our civil war was indeed a sad affair and yet it is plain that it brought to this nation some very substantial benefits.

We believe that the present war will bring back the farmers and villagers to living at home and if it does this it will bring one very substantial benefit.

It is not only extravagant but it is really ridiculous that farmers should be the largest consumers of canned goods, and yet they are. Of all men the farmer should eat the most fresh fruits and vegetables and yet he eats far less fresh fruits and vegetables than his city cousin. It has seemed to be so much nicer as it was easier to buy canned stuff than to produce it at home. We believe that the war will very much reduce the canned stuff consumption by farmers and will very much increase the garden and truck patch stuff raised on the farm.

We hope and believe also, that the war will cause farmers to eat home grown and home made meats instead of buying from the butcher. We should have a general revival of butchering days on the farm. It is more economical and it is also safer to kill and cure our meats than it is to buy them from the local butcher or the distributing agent of one of the big packing firms.

Let us live at home. We will live cheaper and also we will live much better. Our food will cost us less and we can know that it is wholesome.—Illinois Farmer.

SILOS AS WEAPONS

On the battle front big guns are the most effective weapons. No fort, no system of trenches, has been found sufficiently strong to withstand a bombardment of a sufficient concentration of big guns, adequately supplied with shells.

But the fighting in this great world war for democracy is not all on the battle front. And, however long the war may last, and however great may be America's levy of armies, this country's most effective contribution to the cause of the allies will be food.

And what the big gun is to the modern army, the silo is to the modern farmer. It is his most effective weapon. The farmer whose place is adequately equipped with silos never has a crop so poor that he cannot make money from it. Major W. J. Brown made

A QUARTER CENTURY AGO

Items from The Industrialist of May 28, 1892

A new flag has been received for the main building.

The farm department sold a lot of fat hogs last week.

Professor Walters is hard at work filling out the diplomas.

There will be no college exercises on Monday, Memorial day.

Mr. Baxter's bed of cacti in front of mechanics' hall makes a fine show.

The band and orchestra furnished music for the closing social last night.

Two thousand invitations to the exercises of commencement week are issued this week.

Professor Brown has charge of the

The Slacker Acre

H. W. Davis

I am the idle acre.
You will find me on every farm.
For a long time no one has paid any attention to me.
And I am getting tired of being overlooked.
Besides, I hear that I am needed—BADLY.
They say that many folks across the sea and in the cities will go hungry unless each acre does his bit.
And here I am, loafing.
The busy acres are sneering at me.
I can hear them whisper, "Slacker."
They say I am not willing to do my share.
But I am willing.
If somebody will take me and treat me right, I will furnish
Thirty bushels of wheat, or
Seventy-five bushels of corn, or
Sixty bushels of kafir, or
Sixteen tons of tomatoes, or
LOTS of other good things.
I'm not the slacker.
It's the man who neglects me—
HE IS THE SLACKER.

the statement the other day that he makes more money now out of a poor corn crop, because of his silos, than he used to make out of a bumper crop.

This year ought to teach Kansas farmers the value of silos as never before. Because of the wheat failure, more corn has been planted than ever before in the state's history. Unless there is an exceptionally favorable season, much of that corn, especially in the western section of the state, will not produce a paying crop. But it is almost impossible that there should be such drouth or such hot winds as to ruin the crop so completely as to destroy its value as fodder. The farmer who has silos can count even now, then, with practical certainty, on making a good crop. If his corn comes through to the harvest in good shape, he will wallow in money. If the corn does not mature properly, it can be cut for fodder, and the farmer can make money by feeding it to cattle and hogs.

The farmer who has planted big fields of corn will be taking out the best kinds of insurance by building silos this summer—the sooner the better. The federal land bank will be glad to loan him money for an improvement of such permanent value. But the land bank probably cannot attend to all the needs of the state in time. Local bankers should help; the state council of defense could do nothing better than to encourage in every possible way this movement.

The world needs meat as badly as it needs wheat. There can't be meat without cattle, nor cattle without feed, nor sufficient feed of the right kind without silos. Silos will both immensely strengthen Kansas in the fight to feed the world during the war, and leave it vastly strengthened for the sharpened agricultural competition that will follow the war.—Wichita Eagle.

music for G. A. R. memorial services and for Decoration day.

The college cadet band furnished music for the battalion drill on the campus yesterday afternoon.

The older students are receiving the annual visits of general agents with reference to summer occupation.

The special students in drawing are making blue prints of their work for exhibition during commencement.

C. A. Campbell, '91, is employed by the horticultural department in preparing material for exhibition at the World's fair.

Dealers in Manhattan have kindly consented to carry bills against the college until the funds from the government are received.

New matting for the chapel aisles will take its place next week. The old will cover the stairways in the main hall commencement week.

Frank Waugh, '91, sends Professor Walters an original drawing of some complex shade and shadow phenomena observed by him on a factory chimney at Helena, Mont.

H. E. Moore, '91, writes from Portland, Ore., of his engagement with Hulse, Bradford, and Company, wholesale upholsterers, and speaks of having recently visited the school of Miss Eunice Donaldson, second-year in 1886-'87, who is teaching near Oregon City.

The annual game of ball between fourth-years and faculty was played yesterday afternoon in the presence of an admiring crowd made up of the friends of the contestants. The game was chiefly notable for the multiplicity of errors and big scores, both of which were about equally divided between the clubs. At seven o'clock the game concluded, the seniors retiring the faculty with the bases full. Score—seniors, 39; faculty, 38.

BALLAD OF HEROES

Austin Dobson

Because you passed, and now are not—
Because, in some remoter day,
Your sacred dust from doubtful spot
Was blown of ancient airs away—
Because you perished—must men say
Your deeds were naught, and so profane

Your lives with that cold burden?
Nay,
The deeds you wrought are not in vain!

Though, it may be, above the plot
That hid your once imperial clay,
No greener than o'er men forgot
The unregarding grasses sway—
Though there no sweeter is the lay
From careless bird—though you remain

Without distinction of decay—
The deeds you wrought are not in vain!

No. For while yet in tower or cot
Your story stirs the pulses' play;
And men forget the sordid lot—
The sordid care, of cities gray—
While yet, beset in homelier fray,
They learn from you the lesson plain
That life may go, so Honor stay—
The deeds you wrought are not in vain!

ENVOY

Heroes of old! I humbly lay
The laurel on your graves again;
Whatever men have done, men may—
The deeds you wrought are not in vain.

SUNFLOWERS

The Hohens, the Haps and the Ukes
must go.

Why doesn't somebody write an undying ode on the last lump in the basement in the spring?

They are making silk hose so thin
nowadays that it is an awful good thing that shoes are so high.

A good way to keep from talking about the war is to talk about something else, if you know anything else.

It's amazing—this lack of concern the average man shows about the rate of taxation on incomes above \$50,000.

The Germans in this country who have formed a league to dethrone the Kaiser have the right kind of patriotism at last.

The Milwaukee Sentinel says that a good husband tells his wife his faults. We are sure that it would take a good one to beat her to it.

Miss Opal Beanblossom announces that on account of the war she will wear no furs this summer unless the mercury rises above 110 in the shade.

We favor putting all the efficiency experts in the first line of trenches to work out a system of shooting and dodging that will cause the enemy shrapnel to pass between soldiers instead of through them.

UP TO DATE

"Where are you going, my pretty maid?"

"I'm going a-knitting, kind sir," she said.

"And may I go with you, my pretty maid?"

"If you have enlisted, you may," she said.

PROVERBS FOR WAR TIME

Cherish thy parings.
Waste not, want not.
The high cost of living is the whine of life.

A word to the wives is: "Efficient."
If the shoe fits keep on wearing it.
Better no garbage can than a full one.

It's a wise father that grows his own crop.

Beauty is less than skin deep—in a potato.

Bread, scattered from the back door, is the chaff of life.

Eat to live; there is no virtue in living to eat.

When prosperity flies in at the window, garbage slips out at the door.

A rounded purse cannot live in harmony with a full garbage pail.—Florida Extension Service.

AMONG THE ALUMNI

H. H. Haymaker, '15, is in the experiment station at Greeley, Col.

Miss Neva Colville, '13, is taking a nurse's training course in the Wichita hospital.

Miss Edna Pugh, '11, will teach home economics in the Hutchinson high school next year.

Dr. H. D. O'Brien, '11, and Mrs. O'Brien and small son, of Chicago, have been visiting friends in Manhattan.

Mrs. Zepherine (Towne) Shaffer, '11, was the guest of Marie Coons, '09, last week. She was initiated into the Pi Beta Phi sorority.

The work of Miss Helen Halm, '08, is attracting much favorable attention in Peabody college, Nashville, Tenn., where she is teaching temporarily in the department of education.

Elliott Ranney, '16, who is teaching physics in the Wichita high school, has been appointed assistant paymaster in the United States navy. Mr. Ranney will report for duty July 1.

Mrs. Ivy (Harner) Selvidge, '93, who has been very ill at her home in Nashville, Tenn., is reported as improving. She is expected in Manhattan for a visit as soon as she is able to travel.

Miss Mary E. Glenn, '15, who taught this year in the rural high school at Louisville, will teach during the coming year in Bowman, S. D. Her subjects will be domestic art and domestic science. She will spend the summer at Waverly.

Charles Zimmerman, '16, has resigned his position with the Babcock and Wilcox company and is now assistant to the chief draftsman in the experimental aeronautical department of the Goodyear Tire and Rubber company, Akron, Ohio.

Miss Helen Payne, '16, has been elected head of the home economics department of the State Teachers' college, Greeley, Col. Miss Payne held a similar position at Russellville, Ark., the past year. She will spend this summer studying in New York.

E. H. Smies, '13, and Mrs. Winifred (Alexander) Smies, '10, and son John are located in El Reno, Okla., for the remainder of the year. Their address is 521 South Evans street. Mr. Smies is making a soil survey of Canadian county for the bureau of soils, United States department of agriculture.

William Anderson, M. S. '98, assistant professor of mechanical engineering in the Michigan College of Mines, Houghton, and wife, Mrs. Hope (Brady) Anderson, '98, are spending their vacation of a month in Manhattan. Professor Anderson was for several years instructor in mathematics in the college.

Harry B. Yocom, who during the years 1913 to 1915 was instructor in zoölogy in the college, has been elected head of the department of zoölogy in Washburn college. Mr. Yocom will take his doctor's degree in the University of California this summer, and will assume his duties at Washburn when college opens in the fall.

Mrs. Mamie (Alexander) Boyd, '02, of Phillipsburg, writes that she hopes to visit college this summer. She says: "Mr. Boyd and I are training our boys right, I guess. Both save every nickel they get hold of to put into the bank for their college fund. When anyone asks them where they intend to go, they say, 'Manhattan, of course.'"

Miss Wilhelmina Spohr, '97, celebrates the twentieth anniversary of her graduation from the Kansas State Agricultural college by sending \$20 for a paid up membership in the Alumni association. She is to take the degree of master of arts from Columbia university this spring and has just been elected professor of household arts education in Teachers' college.

The Knapp School of Country Life, Nashville, Tenn., under the direction of Dr. K. C. Davis, '91, has organized

a unique food drive. The organization is called the Army of Furrows. Doctor Davis is field marshal and through his students instruction in agricultural methods is going into every community in the vicinity of Nashville. During the afternoons and evenings speakers go out to address audiences of people who are anxious to do their bit in this time of crisis.

MARRIAGES

CLEMONS-NICOLET

Miss Lida Ethel Clemons, '05, and Mr. William Herndon Nicolet were married at the home of the bride's parents, Mr. and Mrs. Royal Rowland Clemons, Riverside, Cal., on May 24. Mr. and Mrs. Nicolet will reside at 620 West Forty-sixth street, Los Angeles, Cal.

DEATHS

JULIUS FREDERICK WILLARD

Julius Frederick Willard, aged 81 years, died at his home in San Diego, Cal., on May 23. He is survived by his wife, by a daughter, Mrs. Mary W. Emrick, '95, of Omaha, Nebr.; and by three sons—Dr. Julius T. Willard, '83, dean of general science in the college; Dr. H. S. Willard, '89, of Manhattan; and the Rev. S. A. Willard of Neosho, Mo.

The funeral was held in Wabaunsee, Kan., May 29.

The deceased was a member of the "Beecher Rifle-Bible Company," of Connecticut, which settled at Wabaunsee in 1856. He belonged to the Kansas Militia, and was otherwise active in the affairs of the state, particularly in the earlier days. His children were among the first in his community to enter college. He resided in Wabaunsee till a few years ago.

ENLISTING FOR SERVICE

To the Women Graduates:

Many times in the past few days I have been asked, by alumnae, "What can I do to help?" and more particularly, "What can I do to help the Red Cross?" This is a very timely and patriotic question, and I shall attempt to answer it as briefly and as specifically as possible.

Every well informed person knows that the American Red Cross society has charge of all the relief work of the army and the navy. It supplements the work of the medical corps of the army and acts as a medium of communication between the people and their armies. By proclamation of the President of the United States on August 22, 1911, the Red Cross was made the only official volunteer organization operating within the United States, and any organization desiring to render help must do so through the Red Cross.

At this time the society has plans under way for the establishing of 25 base hospitals for the army and several for the navy. Each hospital must be ready to serve 500 sick and wounded soldiers, and must have the equipment ready for instant transportation. The equipment for each hospital—not to mention physicians, nurses, and aids—consists of surgical supplies, medical and nursing supplies, all sorts of bandages, operating instruments, and beds, and is secured at a cost of \$25,000, the expense being met by the Red Cross and its friends.

At present, there are 350 local chapters of the Red Cross, the members of which are not required to do more than pay their annual dues, but are offered abundant opportunities for volunteer service. Every college graduate should become a member of either the local or national organization, and if she can not work with a local chapter, she can at least turn her social club or her Sunday school into an auxiliary of the Red Cross.

If you want to form an auxiliary or a local chapter in your community write to S. Pauler Morris, State Capitol Building, Denver, Col., who has charge of the correspondence for the Kansas division.

An auxiliary may be formed with a nucleus of ten members, the fee being the same as for annual members of the Red Cross, and it may be affiliated with

the nearest local Red Cross society or with any you choose. Your auxiliary may assist the local chapter by doing one of many different things. It may furnish a given number of comfort bags for the soldiers; it may open a refreshment stand or reading room for the national guard unit which may be guarding the bridge, the factory, or the elevator in your community; it may make hospital garments for the use of patients, hospital garments for the use of doctors and nurses, and hospital supplies, such as towels, napkins, and bed linen. Patterns for these articles may be secured by sending to the Denver office.

Surgical dressings can best be made under trained supervisors, and the preparation of these is not practicable for the auxiliary.

The local chapters are organizing classes in first aid to the wounded, in first aid to the nurses, in hygiene and home care of the sick, and in dietetics. The first two classes must be taught by trained Red Cross nurses but the last two may be taught by graduates of the college. In this capacity many of you who are just closing your schools, may render valuable service. If you are interested, write to Miss Margaret Haggart, professor of domestic science in the college, for information, as she is a member of the local committee in charge of that work.

To you who are interested in Camp Fire Girls or girls' clubs of any kind, I would suggest that you turn the activities of these young people into direct service for the Red Cross by giving them errand service for the local chapter, and by interesting them in collecting reading matter, games, and picture puzzles for the convalescent soldiers in the hospitals, or in making comfort bags and woven name markers for the soldiers who go out from your community.

A few days ago a college woman who resides in the country asked over the telephone, "What can the members of my Sunday School do for the Red Cross?" She was told, "They can knit socks and wrist bands for the soldiers and sailors." They are now busy at the task. The Red Cross will distribute for you anything that the war department authorizes it to handle.

It is very important that each young woman, and especially each Kansas State Agricultural college graduate, find out just where she can serve best, and then putting her hand to the task, falter not until the war is over. When war exists, woman is the reserve force which makes the army effective. You should enlist for service in the Red Cross, for the Red Cross is the symbol of humanity. It does not divide men; it unites them and keeps them from losing faith and hope.

ADA RICE,
Secretary of the
Alumni Association.
Manhattan, Kan.

SHELL BEANS ARE EXCELLENT CROP FOR PUTTING OUT NOW

Lima Beans Are Good Variety. Though Others May Be Used

That shell beans are a splendid crop for planting in the garden at this season of the year is the recommendation of the garden committee of the Kansas council of defense.

Almost any variety may be used, but lima beans are generally most important for the purpose. Under normal conditions limas are not planted until two weeks after it is perfectly safe to plant string varieties. Dwarf limas are usually planted in rows three feet apart. Eight to 12 inches is the proper distance between plants in the row. Pole limas are planted in hills four feet apart each way, a pole being placed at each hill. The pole varieties may also be planted close to fences, the vines using the fences for support.

There are three distinct types of lima beans, based on the shape and size of the seed. They are the true or large lima, in which the seeds are extremely large when right for use; the Sieva or Carolina lima, which produces much smaller seed; and the potato lima, which is intermediate. The Sieva type is most easily grown.

SHOULD EAT LESS MEAT

AMERICANS SHOULD EMPLOY THIS MEANS OF ECONOMY

Use of Cheaper Cuts and of Substitutes Is Advised by Committee of Council of Defense—Utilize Leftovers

Eat less meat.
Use meat substitutes.
Buy cheaper cuts and cook them in appetizing ways.
Utilize the leftover meats.
These are suggestions from the committee on utilization and economy, Kansas council of defense.

ONE MEAT DISH A DAY

Americans, it is asserted, eat too much meat. Before the war began, this country consumed half again as much meat as Great Britain or Ireland, and nearly twice as much as the nations on the European continent.

If less meat were consumed, the cost for food for a family would be appreciably decreased, with no ill effects to the health of the members of the family. Exactly how much meat should be eaten is a difficult matter to determine, but at least one meat dish a day is an ample allowance. Meat substitutes, such as milk, eggs, cheese, beans and peas, may be used in part for meats.

CHEAP CUTS JUST AS GOOD

The expensive cuts of meat have a better flavor, and are more easily and quickly prepared than the cheaper ones, but have no higher food value. The cheaper cuts, because they are tougher, require more time for cooking, but the fireless cooker can be used in their preparation. The pot roast, the stew, braised meat, and meat loaf are a few of the numerous ways in which these tougher cuts can be prepared to make palatable dishes.

Meat can be made to go farther by adding a small quantity of meat to other materials, as meat with rice, vegetables, or dumplings, and by serving meat pie, meat on toast or biscuit, and similar dishes.

SILLO FOR EVERY FARMER THAT KEEPS MILK COWS

Dairy Committee of Council of Defense Advocates Modern Method of Supplying Succulent Winter Feed

Every farmer who keeps milk cows should have a silo.

The feed question is the most serious problem that dairyman and farmer will have to face this year, points out the committee on dairying, Kansas council of defense. With feeds steadily increasing in price every effort should be made to preserve all the home grown feeds possible.

The silo offers the best possible means of furnishing a succulent and palatable feed for cows during the winter season. Milk cows will produce more milk when receiving silage than they will on dry feed. When corn or kafir is put into the silo instead of harvesting it in the ordinary way a great saving of feed is effected. When corn is put into the silo in place of being handled in the usual way a saving of 30 to 50 per cent is realized.

The principal requirement of a silo is that it be airtight at the bottom and sides. Any material that will fulfil this requirement will keep silage. The cheapest and most practical type to build is the pit silo in regions where water would not interfere within the first 25 or 30 feet from the surface. This type of silo is built on the same plan as the ordinary cistern. In many places in the state the walls of the pit silo can be built by simply plastering the walls with a coating of cement.

FARM ANIMALS REQUIRE DRY QUARTERS FOR BAD WEATHER

Health of Live Stock Depends Largely on Sanitary Conditions

All farm animals deserve decent quarters. The majority of domestic animals need little shelter, but they do require dry, comfortable quarters during wet, cold weather, in the opinion of Dr. L. W. Goss, professor of pathology in the Kansas State Agricultural college.

The health of any animal depends to a large extent upon the sanitary condition of its surroundings, believes Doctor Goss. A dark, crowded, poorly ventilated stable lowers an animal's vitality. This in turn makes it more susceptible to disease.

Insanitary yards often produce a marked effect upon the health of domestic animals. Dry, protected sites are always preferable to those on low, poorly drained soil. Manure, cobs, straw, and other waste should not be allowed to accumulate in barnyards. Such waste makes an excellent breeding place for contagious disease germs.

Stale surface water should never be permitted to stand in a yard where domestic animals are kept. Fresh water is always helpful but that which stands for days becomes insanitary.

Prevention is the greatest remedy for any disease. By keeping barnyards sanitary farmers may prevent many diseases common among domestic animals. Large annual losses would thus be eliminated.

MORE AND BETTER FRUIT FROM STAKED TOMATOES

Plants Will Give Finest Quality of Product if Pruned to Two or Three Stems

Stake tomatoes and get more and better fruit, is the advice of M. F. Ahearn, associate professor of horticulture, Kansas State Agricultural college.

"Tomatoes in the home garden if properly staked give the best results," said Professor Ahearn. "Staking will give satisfactory results with plants that have not been pruned, but the finest tomatoes are secured by pruning the plants to two or three stems."

In tests conducted by the department of horticulture three stems give the best results. Tomatoes may be trained on a trellis, wires or stakes. Barrel hoops have sometimes been used with good effect.

Tomatoes grown in this way can be sprayed easily and are readily harvested, and there are fewer rotten tomatoes than if they were in contact with the soil. If planted close enough fewer fruits will be sunscalded than if the vines are permitted to grow over the ground. This method is somewhat more expensive than the common method of growing tomatoes, but it will pay the home gardener well.

The simplest form of trellis is made by setting posts every 50 feet and stretching one or two wires on them. If onewire is used stakes or lath should be set by each plant. The top of the stake is then tied to the wire and the tomato vine tied to the lath as it grows. The vines should be tied with raffia or strips of cloth, as they are tender and easily bruised.

If one does not desire to prune the vines, the barrel hoop method is probably the best. Three stakes are nailed to the hoop and the vine is allowed to grow up in the center of the hoop. Other hoops may be added above the first one as the plant grows.

GRANGERS TO PICNIC AT COLLEGE ON WEDNESDAY

Talks Will Be Made by Prominent Officers—Inspection Trip and Demonstration Planned

All Granges in the state are invited to the Grange picnic to be held on the agronomy farm of the Kansas State Agricultural college on Wednesday, June 6.

The Grangers will gather in the morning for a basket dinner on the farmhouse lawn at noon. Following the dinner there will be a short program. Talks will be given by B. Needham of Lane, state master; A. P. Reardon of Atchison, past master; Mrs. Mabel Pomeroy of Holton, state chaplain; W. R. Yenawine, master of the Manhattan Grange; Dr. H. J. Waters, president of the college; Dr. W. M. Jardine, dean of agriculture; and L. E. Call, professor of agronomy.

Following the program, a trip for the men is planned over the agronomy farm to study the experimental work in crops. A canning demonstration and lecture will be given at the farmhouse for the women.

MORE HONEY IS NEEDED

OUTPUT SHOULD BE INCREASED 10 TIMES, SAYS MERRILL

Product Should Be Extracted and the Wax Saved, Points Out Entomologist—Proper Equipment Necessary for Bees

Produce more honey!

That honey can be substituted for sugar in many instances, is the assertion of Dr. J. H. Merrill, assistant professor of entomology in the Kansas State Agricultural college. As only one-tenth of the available nectar is gathered, the output of honey can and should be increased 10 times, he contends.

"Cooked food is improved by the use of honey, although honey does not always produce the same effect as corresponding quantities of sugar or molasses," said Professor Merrill.

SUBSTITUTE FOR MOLASSES

"The fact that honey consists principally of sugar and water and is slightly acid suggests that it is a suitable substitute for molasses in cookery. As a matter of fact, it can be used in place of molasses in breads, muffins, and cakes, and makes a more delicately flavored product.

"Honey contains less acid than molasses, however, and so requires less soda when substituted for molasses in recipes which do not include sour milk or other acid. Unless the cook is thoroughly familiar with her honey, she would do well to mix and bake a small sample of dough before she decides on the amount to be used.

EATING COMB HONEY UNPATRIOTIC

"The man who eats comb honey is not patriotic. Two forms are used. The comb honey is only a delicacy, for it must be used within a certain period or it will spoil. Extracted honey is that which has been thrown out of the comb. It can be bottled or canned and stored to be available for substitution later. It is also a saving to use extracted honey, for the wax can be put back into the hive for the bees to use again. Every pound of wax saved is worth 20 pounds of honey."

Proper equipment should be used in order to obtain a maximum amount of honey, pointed out Mr. Merrill. The bees should be provided with plenty of room for brood rearing.

This country only produces 20 per cent of the sugar it consumes, and by increasing the supply of honey this lack may be at least partially overcome. There is little doubt as to the practicability of the substitution. In fact, many of the large biscuit companies buy the extracted honey by the 10 carload lots and substitute it with good results.

BOTTLES WILL HELP TAKE PLACE OF JARS AND CANS

May Be Used Successfully for Preserving Foods, Points Out Committee

Bottles may be used successfully for preserving foods, according to the gardening and canning committee of the state council of defense. Cans and jars of all kinds will be greatly in demand this season, and the supply in some cases will be short.

Small mouthed bottles may be used successfully for currant, plum, grape, and rhubarb juices, strained tomatoes, and other foods mostly liquid in character. Berries, marmalades, preserves, and mustard pickles should be placed in large mouthed bottles.

All bottles should be thoroughly washed and sterilized before use. The insides of extremely dirty bottles can be cleaned satisfactorily by the use of shot or rice. When the bottles are clean they may be rinsed and placed in a wash boiler containing cold water. The water is then brought to a boil and allowed to boil 15 minutes, after which the bottles are removed and placed on a cloth to drain. If the bottles are not to be used at once, clean cotton may be placed in the mouths to prevent the entrance of decay forming organisms. It is best to fill them soon after sterilization.

New corks are best. Old corks may be tested by filling the bottles with

water and inverting them before sterilizing.

Bottles must be sealed tightly. The contents should not stand higher than half an inch from the top, as that much space will be required for expansion. After the bottle is filled the cork is pressed in tightly. While the bottle is warm it is inverted in melted paraffin until a thorough coating is obtained, or sealing wax may be used.

GARBAGE PAIL IS TEST OF EFFICIENT MANAGER

What It Contains Shows Whether Family Income Is Economically Handled or Not

If you want to know for sure whether you are an efficient home manager, take a look into the garbage pail. If you find trimmings from meat, slices of stale bread, thick parings from vegetables, milk, or other bits of food, you are a poor manager of the family income. This is the test advocated by the committee of utilization and economy, state council of defense.

High priced human food should be fed to the family and not to the chickens or hogs, urges the committee, which makes these further suggestions for eliminating waste:

Do not throw away good food.

Do not let food spoil.

Guard food against vermin.

Do not waste food by careless preparation.

WILT WILL CUT NUMBER OF CUCUMBER PICKLES

Plants Must Be Protected Against Disease Which Is Spread by Biting Insects

The housewife will have few cucumber pickles to put up unless the bacterial wilt is disposed of, says the committee on plant diseases, Kansas council of defense. This disease attacks also melons, squashes, and pumpkins, but to a less extent.

Plants are attacked by the wilt when only an inch or so high, but the disease may not become noticeable until later. Affected plants wilt and dry up. This disease is inside the sap and is spread by biting insects, such as the striped cucumber beetle.

In order to overcome the annual loss, the plants must be protected against the insects from the start. Where cucumbers and melons are grown on a small scale it is practical to cover the plants with screens or fine meshed-screen cages. A cage a foot square, fitting firmly, is satisfactory. It is best to keep the plants covered, if possible, until the first brood of striped cucumber beetles is nearly past. Muskmelons may be protected in the same manner.

It is not so important to place cages over squash, pumpkins, or watermelons, but the watermelons should be sprayed to keep the bugs away. They should be sprayed with Bordeaux mixture 4-4-50, plus three pounds of arsenate of lead paste, as soon as they are set out, or as soon as the seedlings emerge from the ground if the seed is planted directly in the soil. The spray should be given at intervals of seven to 10 days.

When the cages are removed from the cucumbers, the plants must be sprayed immediately and at weekly intervals, with the same mixture used on the melons. It is well to leave a few scattering plants unsprayed, so that the bugs will have something to feed on when they appear, for at times they will attack sprayed plants in spite of all precautions.

The navy department has been swamped with applications from youths of 15, 16, and 17 to join the navy. They can be of more aid to their country between the corn rows than they can in the navy.—Secretary Josephus Daniels.

L. C. Williams, assistant in the division of extension, gave a lecture before the members of the garden clubs and their parents at Maple Hill Friday on the subject, "Production and Conservation of Garden Products."

ADDS TO HORSE'S VALUE

PROPER CARE INCREASES EFFICIENCY 25 PER CENT

Sufficient Water, Feed, and Rest Will Help in Hot Weather—Load Rather Than Speed of Animal Should Be Increased

That the efficiency of the average farm horse can be increased 25 per cent by the observance of simple precautions, is the opinion of Dr. C. W. McCampbell, associate professor of animal husbandry, Kansas State Agricultural college.

"Water the horse frequently during hot weather," advises Doctor McCampbell. "He needs large quantities of water and frequent watering will overcome the dangers that result from watering freely at long intervals.

"Feed regularly a ration uniform both as to kind and as to amount. This lessens the danger from colic and other digestive disturbances.

VERMIN LOWER EFFICIENCY

"Eliminate lice, worms, and flies, for they may decrease the efficiency of the work horse 50 per cent and increase the feed bill 25 per cent.

"Clean the collar every time it is put on the horse, and keep its bearing surface hard and smooth.

"Sponge off the work horse when he comes in from work especially where the collar and other parts of the harness have left marks. Sponge out his mouth, nose, and eyes. Soak his feet thoroughly with cold water, but do not turn the hose on his body or legs. Wash his shoulders every night for a few weeks with cold salt water.

"Allow him to stop in the shade for a few minutes whenever possible for a brief rest and a chance to breathe freely and deeply.

WATCH HORSE CAREFULLY

"Watch the work horse carefully. Drooping ears, unsteadiness of gait, short, quick breathing, and a sudden ceasing to sweat are danger signals demanding prompt attention. They mean that the horse is getting too hot and that he must have shade, cooler air, and rest.

"If the horse suffers a heat stroke, protect him from the sun, remove the harness, apply cold to the head—either water or ice—wash out his mouth and nostrils, and sponge his entire body with cold water.

GROOMING WILL SAVE FEED

"Groom the work horse thoroughly. This will save feed and will increase his health, vigor, and power.

"Remember that the horse produces the greatest amount of net power from the feed and care provided when driving a load at a moderate gait, hence greater and more efficient power and energy can be secured by increasing the load rather than the speed of the work horse.

"Provide as cool a place as possible for the work horse at night, for the horse that does not become thoroughly cooled off at night will be in poor condition to stand the heat and work the next day.

"Allow the work horse to rest on Sunday. Do not use him for a work horse during the week and for a buggy horse on Sunday."

GOOD OLD MULE HAS PLACE AS WORK ANIMAL ON FARM

Will Care for Self Better Than Horse and Does Not Depreciate so Much

That the mule has certain decided advantages as a work animal, is the opinion of Dr. C. W. McCampbell, assistant professor of animal husbandry in the Kansas State Agricultural college.

"For the man who does not know how or is unwilling to give his horses a reasonable amount of care, the mule is the better animal because he will take better care of himself than will a horse," said Doctor McCampbell.

"The mule naturally is more able to stand hot weather than is the horse. He will slow down when the work becomes hard and the weather hot, whereas, a horse usually will begin to fret and thus will be even more likely to become overheated. Hence a mule

is safer in the hands of a careless or incompetent driver."

The mule requires less grain and will readily consume more roughage than will a horse doing the same amount of work, pointed out Doctor McCampbell. The mule is less subject to digestive disorders. Another important consideration is that a mule does not depreciate in value so much from age and hard usage as does a horse.

SURFACE RUN-OFF HELPS DEplete KANSAS SOILS

R. I. Throckmorton Explains Methods of Eliminating this Loss—Hay Crops of Value

Surface run-off is an important factor in the depletion of Kansas soils, according to R. I. Throckmorton, associate professor of agronomy in the Kansas State Agricultural college.

"The running off of the surface water decreases the available water supply of the soil by removing from the field water which should be stored in the subsoil," said Mr. Throckmorton. "The loss through run-off is greater than the loss through evaporation. More attention, therefore, should be paid to the handling of crops and methods of cultivation to prevent loss in this way.

"The productivity of the soil is also greatly decreased when water is permitted to run over it. The surface soil contains a higher per cent of available plant food than any other part of the soil, and it is this portion that is carried away.

"Plowing the soil early after wheat harvest and leaving the surface rough form a good method of storing moisture in the soil. The use of a rotation is helpful because it changes the time and depth of a cultivated field. The organic content should be kept high by the addition of manure. This acts as a sponge in holding water and also binds the soil particles together, thus reducing erosion.

"The steeper portions of the farm may be kept in grass or hay crops in order to prevent loss of the plant food and soil moisture by washing. This method is especially applicable to fields which have narrow, steep banks that erode easily.

"Fields that are rolling and must be cultivated should be plowed in contours around the slope. When such fields are plowed up and down the slope, the furrows make drainage ways which may be eroded to a considerable depth in a short time.

"Fields with broad, gentle slopes, that have a tendency to erode from surface run-off, may be improved by constructing one or more dikes on the slope. These dikes should run diagonal with the slope and be given just sufficient fall to carry surplus water. They should be broad and shallow in order to allow cultivation."

CORN FOR HOGS DOES NOT NEED COOKING OR SOAKING

Grinding Is Profitable Only Under Certain Few Circumstances

Corn is ready for hogs when it is shoveled on a clean feeding place. Cooking, grinding, or soaking corn for hog feed, generally is not necessary or practical, in the opinion of Ray Gatewood, instructor in animal husbandry in the Kansas State Agricultural college.

It has been found by numerous experiments that when corn is cooked its digestibility is reduced. The time and equipment necessary for this operation also make it an undesirable undertaking, believes Mr. Gatewood.

It pays to grind corn for hog feed in only a few cases. It is good practice at times to feed ground corn to heavy hogs during the finishing stage in their preparation for market. If the grain is especially hard or flinty it may be ground to advantage. Many farmers grind their corn when the price is high and ordinarily this is found to be an economical practice.

The labor required to soak corn for hog feed prevents this method from being a paying proposition. Then, too, if soaked corn is fed on the ground, the hogs are sure to pick up more or less dirt and filth.

TO THIN GARDEN CROPS

PLANS FOR VARIOUS VEGETABLES PRESENTED BY COMMITTEE

Maximum Yields of High Quality Impossible If Plants Crowd Each Other—When to Reduce the Number

Thinning is a valuable practice in the growing of many garden vegetables, declares the committee on gardening and canning, state council of defense. Maximum yields of high quality cannot be obtained if plants are allowed to crowd each other for space.

In order to secure a good stand it is usually necessary to plant an abundant supply of seed. If all the plants resulting are allowed to grow until maturity, both yield and quality will be reduced.

Vegetables that respond satisfactorily to thinning are beets, carrots, parsnips, turnips if grown in rows, onions, radishes, lettuce, muskmelons, cucumbers, and others in special instances.

Beets, carrots, parsnips, and turnips should stand between four and six inches apart in the row, depending largely upon the variety planted and the stage of maturity at which it is to be harvested. The thinning should occur as soon as the plants are large enough to distinguish the strong from the weak individuals. If the ground is dry and hard it should be wet thoroughly several hours before the plants are to be pulled.

Beet seedlings may be used for greens or may be transplanted into new rows. The tops should be clipped and the plants set about four inches apart in shallow furrows which have been thoroughly soaked. The young plants should be pressed firmly into the soil and dry dirt spread around them to prevent baking.

Onions should be thinned at the time of the second weeding, preferably before the plants have reached the size of a lead pencil. Three inches is about the proper distance between seedlings.

Radishes and lettuce are best thinned after the first plants are ready for use.

Muskmelons and cucumbers when planted in hills are very susceptible to disease and insect attacks. Six to eight plants are usually started but only one or two of the strongest are permitted to grow into vines.

Beans are sometimes planted too thickly. In such cases thinning to a distance of three inches will increase the yield of most varieties.

WASTE AMOUNTS TO 6,000 BARRELS OF FLOUR A DAY

One Ounce of Food in Every Home Means 1,200,000 Pounds in Whole Country

The United States wastes probably the equivalent of 6,000 barrels of flour a day. If only one ounce of food, on the average, is wasted in each of the 20,000,000 homes in the country, 1,200,000 pounds goes to waste daily.

To help eliminate this waste, the committee on utilization and economy, Kansas council of defense, makes these suggestions:

Remember that food left on your plate has to be thrown away.

Serve moderate portions. If the first portion proves too small, serve a second.

Be saving of sugar. Avoid using more than is really needed. Enough sugar is left in the bottom of the coffee and tea cups of the average family to furnish sugar for one soldier.

No meat should be wasted. In trimming a piece of meat for cooking, any fat, bits of meat, or bone, should go into the soup kettle. Bones from roasts, and leftover scraps of cooked meat should also be utilized in making soup. All suitable pieces of leftover meat should be combined in some way with other materials to make such dishes as meat salads, hash, and creamed meats.

Three women's extension schools have been conducted in Burdick by the division of extension of the Kansas State Agricultural college, and plans are being made for holding a fourth school.

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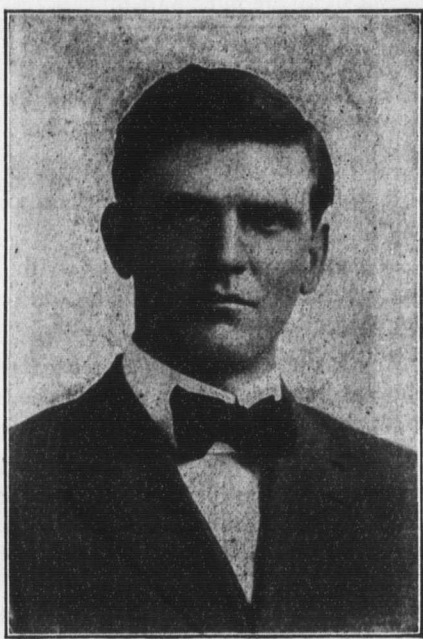
Number 34

AID TO KANSAS FEEDERS

EXPERIMENTS AT COLLEGE WILL PROVE OF HIGH VALUE

Value of Feeds Grown in Kansas Is Shown by Detailed Tests—Cattle Furnish Market for By-products—Benefit to Land

Feeding experiments conducted at the Kansas State Agricultural college between December 1 of last year and May 30, the results of which were announced at the fifth annual cattlemen's



PROF. W. A. COCHEL

meeting at the college June 1, are expected to prove of inestimable value to cattle feeders of Kansas.

The meeting was attended by prominent cattlemen from all sections of the state, although a large number of persons were kept away by adverse weather. The feature of the meeting

T. H. Ingwersen, Chicago, cattle buyer for Swift and Company; P. W. Goebel, Kansas City, Kan., president of the American Bankers' association; W. J. Kennedy, Sioux City, Iowa, formerly head of the department of animal husbandry in the Iowa State college; F. W. Farley, in charge of beef cattle investigations, bureau of animal industry, United States department of agriculture; Dr. W. M. Jardine, dean of agriculture; and W. A. Cochel, professor of animal husbandry, who explained the experiments.

Lunch was served in the college live stock pavilion. The visitors were entertained at this time by an exhibition of college prize winning stock. The merits of the individual horses and beef cattle were explained by Dr. C. W. McCampbell, associate professor of animal husbandry. O. E. Reed, professor of dairy husbandry, officiated when the dairy cattle were brought before the guests. Later the college sheep were inspected. A. M. Paterson, instructor in animal husbandry, has charge of the sheep, and has just completed a three years' experiment in feeding lambs. The inspection of the agronomy farm, which had been planned by L. E. Call, professor of agronomy, was impossible because of rain.

UNIQUE IN EXPERIMENTAL WORK

This was the first time in the history of agricultural experimental work that the results from feeding a group of cattle for market were obtained from individuals whose dams were grown under experimental conditions. An accurate record of the cost of their production has been made.

The cows from which the calves used were developed cost \$30 a head at weaning time in the fall of 1913. A year later they weighed 642 pounds and had cost \$51.60 a head. Two

NO TIME FOR SLACKER

MAKE SACRIFICES FOR NATION, URGES PRESIDENT WATERS

Patriotic Address at Student Assembly on Registration Day—Captain Mathews Bids Farewell to College—Band Enlists

This is no time for slackers! Every man should be willing to sacrifice money, time, or life in the support of the government, declared Dr. Henry J. Waters, president of the Kansas State Agricultural college, in a patriotic address before the student assembly Tuesday morning.

"Furnishing man power is not going to be our only duty," said Doctor Waters. "Many persons thought at first that advancing loans would be our only part. That is not going to be our most important duty. Every man and every woman who has money ought to contribute. The liberty loan ought to be oversubscribed 100 per cent. Failure would simply prolong the war."

ESTABLISHING NATIONAL POLICY

"We are not going to let 5 or 6 per cent of our best young men shed their blood while we sit back and do nothing. Everybody who holds back is a slacker."

"This day will go down in history as one of the greatest days of our nation. I hope we are establishing a national policy—the principle of universal service, a service that is recognized just as we recognize universal equality and universal rights."

"The volunteer system is the most costly and wasteful that we could adopt. It robs industry and leaves exposed our industrial pursuits. England found it best to adopt the system we are adopting today. We are preparing to make war as no democracy has prepared in history."

BE WISE IN TIME

"We have set our hands to the plow and are going into this war seriously. We are hoping our men and boys will smell salt water and will return without smelling the smoke of battle, but let us not make the mistake of not being wise in time."

"I have learned to love the German people, and like to think of this as being a war against an intellectual philosophy."

BAND TO MARINE CORPS

Capt. L. O. Mathews, who left Tuesday evening to join the Forty-second United States infantry, stationed at Fort Douglas, Utah, announced at the general assembly that the college cadet band will be the first contingent to land on foreign soil when the boys in khaki are sent to aid the allies. Burr Ozmert, leader, and his musicians have enlisted as a unit in the United States marine service.

"The band of the Kansas State Agricultural college has made a name for itself throughout the country," said Captain Mathews.

COLLEGE CADETS RANK HIGH

Captain Mathews told of the high standing of the college cadet corps—of the fact that last year the corps ranked first among similar organizations in the country, and that high honors are expected this year. Captain Mathews offered the belief that all members of the cadet corps who have enlisted in the service of their country will be a credit to the institution. He expressed regret because of the necessity of leaving the college. In the absence of Captain Mathews, Captain Edward Claeren, who has been assistant to the commandant, will serve as head of the military department.

Miss Mildred Albert of Junction City gave a reading from "The Man Without a Country." Vocal music was furnished by a quartet composed of Elton Calkins, tenor; Miss Faye Richards, soprano; Miss May Carley,

contralto; and Arthur Wesbrook, bass.

J. E. Kammeyer, professor of economics, explained why, when, and how all men within the age limits should register.

PHI KAPPA PHI TO HOLD INITIATION ON JUNE 18

Honor Society Will Have Annual Services in Commencement Week—Members to Attend Should Give Notice

The regular annual initiation services of Phi Kappa Phi, scholarship society, will take place at 5 o'clock Monday afternoon, June 18, in the domestic science rest room. They will be conducted by Dr. Henry Jackson Waters, president of local chapter of the fraternity.

It is hoped that alumni members of the organization will be present. Persons expecting to attend the dinner, which will follow the initiation, should notify Mrs. Mary Pierce Van Zile secretary of the chapter, not later than Wednesday, June 13.

ELEVEN GRADUATES FROM SCHOOL OF AGRICULTURE

Henry J. Allen Will Deliver Commencement Address June 15—Girls in Majority in Class

Eleven students will be graduated from the school of agriculture of the Kansas State Agricultural college, Friday, June 15. The exercises will be held in the auditorium at 8 o'clock. Henry J. Allen, editor of the Wichita Beacon, will deliver the address. The diplomas will be presented by Prof. H. L. Kent, principal of the school.

The graduates from the course in agriculture will be Elmer G. Becker, Meriden; Walter O. Howell, Kensington; Karl Quisenberry, Newton; Henry E. Rahe, Winkler; Fred Robb, Scott City.

From the course in home economics will be graduated Miss Bertha Altus, Garden City; Miss Ruth Hazel Branch, Manhattan; Miss Zelma Kyner, Sharon Springs; Miss Marie Long, Manhattan; Miss Edith Riley, Piedmont; Miss Clara Schober, Hiawatha.

SOUTH TO GROW BIG ACREAGE OF FORAGE CROPS THIS YEAR

Feed Will Be Shipped North and Feeders in Opposite Direction

The south will grow the largest acreage of forage crops this year that it has ever grown, asserted F. W. Farley, in charge of beef cattle investigations in the bureau of animal industry, in an address at the fifth annual cattlemen's meeting at the college June 1.

"A new feed, the velvet bean, is being used extensively as a cattle feed," said Mr. Farley. "The south has something like 5,000,000 acres of it this year. At a conservative estimate it will produce a ton to the acre. It has been found that two pounds of velvet beans in the pod equal one pound of cottonseed meal."

"There is not enough stock in the south to eat the forage crops and the velvet bean crops. A large amount of this feed will be shipped north or a great many feeders will have to be shipped to the south."

LATE POTATO CROP USUALLY IS NOT ADVISABLE IN STATE

Dry Weather in July May Cut Down Yield Materially

Under average conditions the Kansas farmer should not plant a late potato crop, in the opinion of F. S. Merrill, assistant professor of horticulture in the Kansas State Agricultural college.

"A late crop of potatoes will suffer from the extreme heat of late summer," said Professor Merrill. "In the greater portion of Kansas dry weather will more than likely destroy the crop late in July or August or at least damage the crop to such extent that the yield will be small."

CATTLE PAPER IS BEST

STOCK INDUSTRY RIGHTLY MANAGED MAKES BEST SECURITY

Loans Should Be Made by Those Who Know the Business and Can Carry Accounts to Maturity of Animals, says P. W. Goebel

Cattle raising is the greatest industry in the country and affords the best security upon which to base paper if it is done properly and by the right kind of cattlemen, in the opinion of P. W. Goebel of Kansas City, Kan., president of the American Bankers' association, in an address at the fifth annual cattlemen's meeting at the Kansas State Agricultural college. He spoke on "Financing the Cattleman."

"In order to make the financing of the cattleman legitimate and successful, you have to handle the cattle industry just the same as any other line of business which is producing something," said Mr. Goebel. "In order to do that you have to get away from commission agencies. I am not objecting to the commission method of buying and selling cattle, but commissions ought not to enter into the consideration of making a loan."

HONESTY AND ABILITY COUNT

"A cattle loan ought to be made by persons or banks who know the business and whose capital is large enough so that they can carry the loan to the maturity of the stock and not merely to the maturity of the loan. There is no trouble in financing the cattleman who understands his business, who has a reasonable margin in his business, and who has demonstrated that he knows how to handle cattle."

"The first thing the bank is going to consider is the question of honesty. The second will be the question of ability to handle cattle and get the best results from every pound of feed put into the cattle. The next point to be considered will be economy with which he conducts his business, and last, perhaps, will be the amount of property he has outside of the stuff upon which the loan is to be based."

CATTLE ON EVERY QUARTER

One cannot expect to get the best rate of interest and to have the assurance that the loan will be carried to the maturity of the stock rather than to the maturity of the loan unless it can be shown that one is all right in the particulars mentioned, the speaker contended.

"The thing needed to make the cattle business a success is enough cattle on every quarter section to consume the feed raised there and for every man to mature cattle for market."

"Cattle loans should not be made for more than six or nine months at a time because a good many things can happen to a herd of cattle in six or nine months."

"I see no reason why interest rates should be higher during the war. Of course, they have been abnormally low—too low because they permit of speculation."

"One of the worst things for the cattle industry is the large number of cattle loan companies that have sprung up in the last few years. With a \$25,000 capital some of them have floated \$3,000,000."

The deans of the several divisions of the college are now receiving letters from those students who went home to work and who were to report the first of each month by mail. Most of the letters show that the boys are doing as they promised.

The demand for Aggie engineers is unprecedented. Large numbers of requests from manufacturing and other concerns are pouring into the office of A. A. Potter, dean of the division of engineering. These positions cannot be filled for all members of the graduating class have secured positions.



THESE CATTLE RECEIVED GROUND BARLEY, OIL MEAL, ALFALFA HAY, AND SILAGE (LOT 24).

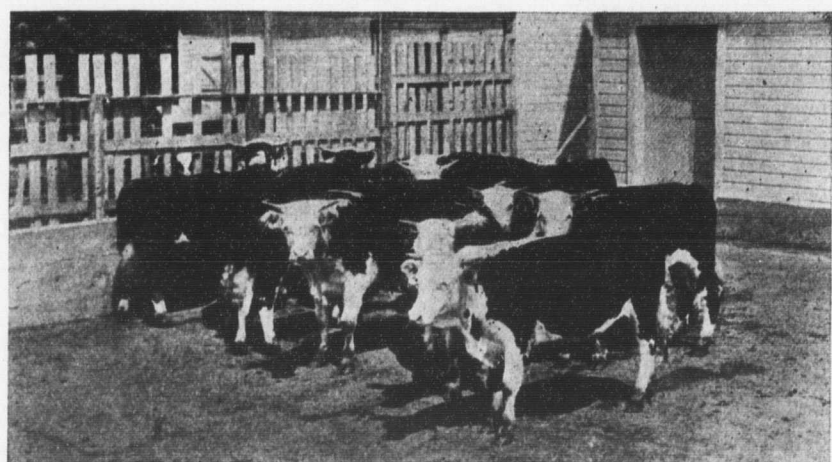
was the explanation of the feeding experiments. The addresses were timely and comprehensive, and the speakers all men of prominence.

MANY SPEAKERS AT MEETING

Dr. Henry J. Waters, president of the college, presided. Speakers were W. R. Stubbs, president of the Kansas Cattlemen's association and former governor of Kansas; Murdo McKenzie, manager of the Brazil Land and Cattle company, San Paulo, Brazil;

years later they weighed 928 pounds and had cost \$70.97 each. They were bred in the spring of 1915 and when 36 months of age and weighing 928 pounds, produced the calves which were used for the experimental work. The total cost of maintenance from the fall after they were bred until the calves were weaned was \$22.14 a head. With an 80 per cent calf crop the average cost of these calves at weaning

(Concluded on Page Three)



THESE CATTLE WERE FED ON SHELLED CORN, OIL MEAL, AND SWEET CLOVER HAY (LOT 28).

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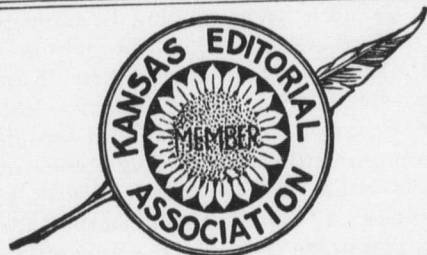
H. J. WATERS, PRESIDENT.....Editor-in-Chief
N. A. CRAWFORD.....Managing Editor
J. D. WATERS.....Local Editor
ADA RICE, '95, M. S. '12.....Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

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WEDNESDAY, JUNE 6, 1917

WORK OF THE RIGHT SORT

The animal husbandry department cannot be too highly commended for its progressive work, not only for the college but for the interests of the live stock industry in Kansas and indeed in the whole middle west.

Through experiment, through adoption of the best adapted practices in animal breeding and feeding, and through sound judgment in buying and selling, Professor Cochel and his staff have built up a department which commands nationwide respect both from agricultural educators and from practical stockmen.

Students in the department receive the best of training—a training which shows them the advantages of live stock farming, as is evidenced by the fact that from 80 to 90 per cent of them actually enter farming upon graduation. Men engaged in the live stock industry in Kansas and nearby states are helped not only by the results of the far reaching experiments carried on, but by the impetus which the department has given to animal husbandry.

The work is of just the sort that a state institution should do—work that benefits the students in the institution and work that directly benefits the state as a whole.

CAPTAIN MATHEWS

Every member of the faculty and every student in the college regrets the departure of Capt. L. O. Mathews, commandant of the military department, who has left to join his regiment in Utah.

The institution has had many fine, strong, and able men at the head of its military department, but none of them has stood higher in point of efficiency or in the universal respect of faculty and students than Captain Mathews. He is a genuine leader and a genuine gentleman. The military department, even if there were no war, would rank high among all the departments of the college. Its special value in this war time is shown in the number of students who have been accepted for the officers' reserve training camp and for the various branches of the regular service. The qualifications of these men and their readiness to serve under arms for the nation are evidence of the efficient and patriotic training maintained by the college military department.

If he is called to active service in the war, the college confidently expects Captain Mathews to render distinguished service. When he returns, the college hopes to have the privilege of welcoming him as a leader among those who have successfully upheld democracy against the mad autocrats who are striving to destroy it.

GOOD JUDGMENT IMPORTANT

When feed is high it is all the more important that one use judgment in

balancing the ration.—Holstein-Friesian World.

FAITH IN THEIR PRODUCT

A rich manufacturer of asbestos took a house just across the street from a sweet-spirited old lady, and his family proceeded to enjoy itself in what seemed to her a very worldly fashion.

But the old lady was never known to speak ill of anyone, even when her neighbors played tennis on Sunday. She only said:

"Dear me! they must have great faith in their asbestos."—Agriculture.

GOOD FEEDING PAYS

Often the young cow that is poor and skinny can be made to produce a lot of milk and butterfat. Professor Erf of the Ohio State university recently told of such an instance. A young Jersey cow had been bred in the southern part of Ohio and fed only the poorest kind of feed. Under these conditions she produced about 2,200 pounds of milk in a year. Now, under different management, she is producing around 12,000 pounds of 5 per cent milk! Good feed and proper management made the difference.—Ohio Farmer.

WHEN FARMS ARE PROFITABLE

The manager should be able to determine where his profit comes from. He is entitled to a fair return for his labor in addition to a fair income on the farm investment. The value of the farm and its equipment, if converted into cash, might be loaned or invested in some other business where a satisfactory income could be expected. If the farm is not paying a satisfactory income on the investment with fair wages for the labor, then there is something wrong with the business methods or farming is not a paying occupation.

Some of the most profitable farms may not provide a cash surplus at the end of the year. The farmer and not the farm is the factor that controls the expenditures. There are many farmers in debt who must remain so for many years, but who nevertheless are getting profits from their farms. One may invest the income from his farm in live stock, another in implements, another may buy more land. There is a large number who are investing in the education and training of the children to give them advantages for society and citizenship.

There is but one way to determine what the farm is paying and where the income is being invested, that is to keep accounts. And without accounts it will be a very difficult matter to adjust the managements so profits may be expected.—Farm and Ranch.

STRAWBERRY SHORTCAKE

Now that the price of strawberries is going down so that it is not a luxury to look at them, many interesting discussions may be heard as to the proper way to make strawberry shortcake. These discussions do not take place among women as you would suppose, but among men. Probably the women all think they know the way in which that toothsome delicacy should be made and therefore there is no need for discussion, but wherever a group of men are gathered, you may be certain that very soon the conversation will drift around to shortcake.

According to one, the only way it should be eaten is the way his wife fixes it. "She makes a layer cake," he says, "mashes the berries all up so you get all that good juice, puts the berries between the layers and all over the top." That, according to his ideas, is the only way to make shortcake.

Another member of the group disagreed with him entirely. "The cake part shouldn't be sweet," he said. "It should be made just like biscuits and then the berries mashed and put over it."

And yet another thought that the best way was to take just a slice of cake and put the whole berries on it, his theory being that the berries were better when not mashed.

Each one in the group had a different recipe for the making of shortcake, with all kinds of variations. Some almost came to blows over the question as to whether the cream to be served with it should be whipped or not. The group finally dispersed without coming to any one conclusion as to the proper way in which it should be done, each one thinking he had convinced the others.—Kinsley Graphic.

Miss Laura Day, A. Dickens, and E. C. Abbott are elected student editors for the fall term.

Several members of the faculty expect to attend the funeral of John A. Anderson at Junction City on Monday.

S. C. Harner, '90, greets college friends. He is farming near Lasita, a newly established post office in northern Riley county.

H. B. Gilstrap, '91, comes in from Chandler, Okla., today to witness the

The Hope of Agriculture

Holstein-Friesian World

ABRAHAM Lincoln said of the boy, "He is the inventor and owner of the present and sole hope of the future, and men and things everywhere are ministering unto him."

Do we appreciate the importance of the boy? Do we realize that, as Lincoln said, he is the sole connecting link between us and the wonderful future? Are we taking steps to win him to our agriculture? Would we have the fear of world famine staring us in the face if we had considered the boy question a little more intimately, a little more clearly, a little more unselfishly?

To argue boys' worth from whatever standpoint would be as useless as it would be to debate the value of daylight, and yet many of us, particularly on the farms, do not begin to approach this all-important matter as we should and to accord to the boy his proper fitting, in the general scheme of things. His is a large place.

We have at present in these United States some 16 millions of boys, ranging in age from five to 20 years. A proper proportion at present are on farms, but the burning question is, will they stay there? The answer rests with the men who today guide the destinies of agricultural America and with the farmers themselves. If they fail to appreciate the qualities of youth or to recognize the importance of cultivating the boy as they should, they will sink their magnificent industry into the lowest depths of oblivion. For youth alone can build it permanently.

Here's an appreciation of the boy written by some master hand and worthy of careful study; it may help to bring some of us to a better realization of the important position the future citizen occupies in our matters of time and place:

"He's in your own home or next door or down the street or road—any street or road anywhere between Eastport and San Diego.

"He's playing marbles or mumblepeg or limbering up his muscles for the unofficial opening of the real major league—if his trousers stop at his knees. If they drape his shoe-tops, he's 'sprucing up' to shine before his latest 'best girl,' or wondering when the boss will give him a raise or what he'll be able to do when war comes or any one of a thousand other things that have provided a supply of mental question marks for youth since the boyhood of Adam's first born.

"His incalculable horsepower of energy, inquisitiveness and enthusiasm carbonates the whole cup of life and keeps it bubbling over. His fine disdain of caste constitutes a divine declaration of independence. He is the original democrat and all the seeds of revolution sprout first in him.

"Nature has made him a radical and primed him with a love for liberty. His dreams are the pillars of progress. In the carpenter shop of Nazareth he catches a gleam of the true meaning of plummet, square, and level, and plans the Sermon of the Mount.

"Swinging his bare feet from a quay in Genoa, he wonders what else besides the setting sun is in the western sea—and uncovers a new world."

Agricultural America needs the boy, and the leaders of thought and the doers of deeds who would mold and guide the destinies of the business of feeding the world must wake up to the importance of getting their just share of boyish enthusiasm at work upon the farms.

A QUARTER CENTURY AGO

Items from The Industrialist of June 4, 1892

Visitors are arriving by scores.

H. W. Avery, '91, is here for commencement.

Doctor Mayo visited Kansas City on business last Monday.

Flowers have not been so scarce at commencement time for many a year.

H. N. Whitford, '90, has gone to Colorado Springs to spend the summer.

Miss Emma Glossop, '83, is in Chicago pursuing a special course of study.

Mrs. Ida (Quinby) Gardiner, '86, greets friends in and about college this week.

exercises that give his sister the degree of bachelor of science.

The Austrian pines on the college grounds are again, by the processes of nature, converted into Christmas trees, decorated with myriads of candles.

Owing to the part the college takes in honoring the remains of the Hon. John A. Anderson, which arrive tomorrow afternoon, the Baccalaureate sermon will be postponed until five o'clock.

The seventh division of the third-year class occupied the chapel rostrum yesterday afternoon in the last public exercise of the year. Speakers and topics follow: R. C. Harner, "Occupations;" Miss Nora Newell, "The Southern Ballot;" John E. Thackrey, "Two Kinds of Power;" Miss Phoebe Turner, "An Exception;" C. H. Thompson, "Ideals vs. Individuals."

THE HIGH ADMIRAL SPEAKS

M. E. Buhler in the New York Times

Now, go ye forth, fair gentlemen,
And sail upon the sea;
And fight beside me, sons of mine,
Who still are one with me!

The spirit of the conqueror
It lieth not in dust,
But still goes on from son to son
Who keepeth our high trust.

Ye name my name, I rise again
Right glad and merrily,
Who for three hundred years have lain
In Cornwall by the sea.

Oh, fair is young Virginia,
And sweet is Caroline;
And well I knew the skies were blue
That shone on me and mine!

As swept the Great Armada
Up from the Spanish sea,
And melted like the morning mist
Before my men and me,

So shall this strange new sea-craft
Be banished from the main,
When we sail forth as once we sailed
And fight the fight again!

SUNFLOWERS

The correspondence course of love runs more smoothly than any other.

Thank Goodness! there ain't no such animal as a hyphenated American any more.

You can now tell the man with a country from the man without one by the uniform he wears.

What, oh what has become of the old-fashioned square meal that people used to mention in a casual way?

England is going to dispense with lap dogs—no doubt because they eat much food and have a negative effect on the population.

A NICE LITTLE DITTY

Rain, rain, go away,
You've rained at least eight times today.

June the Fifth is more than likely to throw our old stand-by, July the Fourth, in the shade this year—and maybe for several years.

'T WAS EVER THUS

The young man goes away to war,
Where shot and shell do rattle;
The married boob remains at home
And fights the same old battle.

A German sympathizer is a man outside of a lunatic asylum who believes that England has violated the rights of the United States as much as or more than Germany has.

USELESS CRITICISM

Every now and then we hear a "knock" that some wiseacre has taken at the forces that are now working to help the farmer in the production of larger crops. In times past I have thought that there was some excuse for that kind of criticism and I have felt that movements in the farmer's behalf were not always free from ulterior motives.

But I think that knocking is very much out of place just now. It savors very much more of grandstand play and selfishness than it does of a disposition to be helpful. Let it be admitted that many of the suggestions being made for increased crop production are not practical, the farmer will perhaps be the first one to recognize that fact and he will not be slow to choose between the recommendations that are good and those that are bad.

Why criticize those who want to help? Are their motives not good? Or is it that the farmer is being made the goat of this entire situation? If such criticism is right then it will do two things: It will discourage those who want to help and it will encourage the farmer to feel that in this national crisis he is an independent factor whose cooperation is not needed and should not be sought.

I prefer to feel that those critics do not express the sentiment of the great body of patriotic farmers any more than of any other class of our people who feel called upon to join forces with all others who show an unselfish desire to be helpful. Now is a good time to observe the slogan, "Bury the hammer and buy a saw."—Nebraska Farmer.

AMONG THE ALUMNI

Miss Edna Barber, '15, was a college visitor last week.

Miss Nellie Olson, '15, dietitian at Christ's hospital, Topeka, is spending a part of her vacation in Manhattan.

Ulysses Grant Houston, '81, received the degree of master of arts last week from Bethany college at Bethany, W. Va.

Glenn F. Wallace, '16, is assistant agriculturist for the Kansas City Southern railway. His headquarters are at Mena, Ark.

Dr. L. B. Jolley, '01, of North Chicago, Ill., is taking a postgraduate course in diseases of women and children in New York City.

Miss Effie Carp, '15, of Spearville, is taking special work in the College. She expects to return to her work in the Spearville high school next year.

Mrs. Mary (Willard) Emrick, '95, was in Manhattan last week, the guest of her brother, Dr. J. T. Willard, '83. She came to attend the funeral of her father.

Miss Fern Faubion, '16, is spending her vacation in Manhattan. She taught home economics in Chokio, Minn., this year, and next year will be instructor in the same subject in the Fairfax (Minn.) high school.

E. W. Denman, '12, is visiting in Olathe. He expects to return to Manhattan for commencement. He is living in Wilkesburg, Pa., where in addition to his regular work he has taken up the duties of boy scout commissioner.

Miss Eva Townsend, '16, who is head of the home arts department in the high school at Neodesha, has been spending a few days at college. She expects to spend the summer at Nickerson, but will return to her work at Neodesha next year.

BIRTHS

Born, to Mr. L. J. Rawson and Mrs. Nell (Wreath) Rawson, '12, Wamego, on May 26, a son, Leonard James.

CLASS OF 1907 REUNION

The reunion of the class of 1907 will be held at 5:30 o'clock Wednesday afternoon, June 20, on the Kimball lawn, 601 North Manhattan avenue. If you are planning to be present please write to Miss Mary Kimball, Manhattan.

DEATHS

MRS. H. S. RECORDS

Mrs. H. S. Records died Wednesday morning, May 30, at her home in Deer River, Minn. She was the wife of H. S. Records, '09, instructor in the Deer River high school.

The funeral was held in Grand Rapids, Minn., Friday afternoon, June 1.

MARRIAGES

BERKEY-GIST

Miss Opal J. Berkey and Mr. J. C. Gist, '14, were married Saturday, May 26, at Racine, Wis.

Mr. and Mrs. Gist will be at home after July 1 at Leavenworth, Kan., where Mr. Gist is in engineering work for the Missouri Valley Bridge and Iron company.

BLANCHARD-ANDERSON

Miss Margaret Ann Blanchard, '14, and the Rev. Ray Anderson, '11, were married May 29 at the First Presbyterian church in Manhattan, the Rev. Drury Hill Fisher, pastor, officiating.

The ceremony was followed by a reception given at the home of the bride's parents, Mr. and Mrs. A. D. Blanchard, 1640 Fairchild avenue.

Mrs. Anderson is well known in college circles and among the townspeople. Mr. Anderson was well known in college and was a member of the Aztex fraternity.

Mr. Anderson was recently ordained to the ministry and is in charge of the Presbyterian church at Ellsworth.

BETTER HORSES NEEDED

HIGHER QUALITY IMPORTANT FOR KANSAS, SAYS SPECIALIST

Average Animal Worth Less Than What It Cost to Raise It, Says Dr. C. W. McCampbell—Essentials of Profitable Production

Better farm horses are necessary in Kansas, in the opinion of Dr. C. W. McCampbell, associate professor of animal husbandry in the Kansas State Agricultural college.

"On January 1, 1916, \$2,150,468,000 was invested in horse stock in this country," said Doctor McCampbell. "In spite of this enormous investment, too little attention has been given to the kind of horses raised, as the average value in the United States on January 1, 1916, was only \$101.60. Yet statistics have shown that it costs \$104.06 to raise the average horse until it is three years of age.

COST IS NOT CONSIDERED

"One reason for so little progress in improving the general average of farm horses is the fact that most producers are raising horses for service on their own farms and are giving little attention to the cost of production, cost of maintenance, and amount of service rendered. Such producers fail to appreciate the difference in efficiency between different types of horses and the difference in the cost of labor rendered by horses of different types, and continue year after year to breed their mares with little thought as to the kind of horses they will raise.

"On the other hand, the producer of cattle, hogs, and sheep is raising a product that will be sent to market at the earliest possible age. It is only natural that he should give more attention to the cost of production and make a greater effort to produce a more efficient and profitable animal.

THERE'S AMPLE MARKET

"Another important reason for much of the lack of interest in the kind of horses raised is a feeling in many localities that there is no market for good horses. This belief is due to a general lack of authentic information regarding the horse supply and the demand of the country today. Where this idea is prevalent, the producers fail to appreciate the fact that while there is no longer a demand for horses of certain types, horses of other types are in greater demand at better prices than ever before.

"Tractors have no doubt caused some apprehension regarding the future of the horse, but careful observation and experience are proving that the tractor will never decrease the need for good, sound, heavy horses. Such horses have increased in value 10 per cent during the past ten years, according to the Chicago horse market reports. All horses passing through that market in 1906 that would classify as drafters, including the good, bad, and indifferent, averaged \$190 a head. In 1916 the same class of horses averaged \$210 a head. The demand for horses on farms and the influence this demand exerts in making horse values is shown by the fact that under normal conditions only 1.5 per cent of the horse population of the country passes through the central horse markets annually.

WHAT TYPE IS PROFITABLE

"The profitable type is the sound, good looking, bold going, easy keeping, durable horse weighing in working condition 1,500 pounds or more. Such a horse not only meets the needs for efficiency and economy in farming operations, but it also sells for the high dollar on the open market.

"Market reports show that the bigger the horse the better the price, provided size is combined with quality and substance. The market quotation here given is typical:

"Common 1,300 to 1,400 pound chunks, \$165 to \$185; medium weight chunks (1,400 to 1,500 pounds) with flesh and quality, \$190 to \$215; heavy weight chunks (1,500 to 1,600 pounds) \$200 to \$225; horses weighing 1,600 pounds or more, ready to go to work, \$175 to \$350."

If the producer hopes to raise the most efficient farm horse which is also

the most profitable market horse, he must observe more carefully the fundamentals in profitable horse production, believes Doctor McCampbell.

THESE ARE FUNDAMENTALS

First, horse raisers must study more carefully changing economic and market conditions which affect horse demand, values, and prices, and determine whether these changes are permanent or only temporary.

Second, horsemen must study more carefully those features of conformation and soundness that make a horse a good individual.

Third, breeders must study more carefully the various types of horses that they may be better able to select the efficient and profitable type. A well defined and correct ideal as to type and conformation and a persistent effort to produce this ideal are absolutely essential before one can hope for success in raising profitable farm horses.

Fourth, horse raisers must study more carefully the cost of production. Today the average horse breeder of this country is raising a \$101 horse at a cost of \$104.

PUREBRED SIRES WORTH WHILE

Fifth, horse raisers must learn to appreciate more fully the value of good, sound purebred sires. Approximately half of the stallions used in the United States today are grades and scrubs, but one can afford to patronize only the best class of purebred sires. The country is overstocked now with horses sired by grades or scrubs which can be purchased more cheaply than they can be raised.

Sixth, horse raisers who would produce the most profitable kind of horses must retain for breeding purposes the best mares at their command. Too much is expected of the stallion. The best colts must have good dams as well as good sires.

MUST FEED COLTS BETTER

Seventh, horse raisers must learn to feed colts more liberally from the time they are old enough to eat, bearing in mind that the feed and care the colt receives during the first year and a half of its life, and particularly during the first winter, determine very largely what the colt will be at maturity.

Eighth, horse raisers must give more attention to the care of their horses, especially the brood mare. Only one colt is raised from every three mares mated, which means a tremendous loss to the horse raisers of the country. This loss in Kansas has been conservatively estimated at \$2,000,000 annually.

Ninth, horse raisers must take a more active interest in their local horse and colt shows, for there is nothing equal to a good horse and colt show to stimulate a keener interest in better horses. The classification must reach and interest the producer, and there are two classes in which he is especially interested—the colt and the farm team classes.

COMMUNITY COÖPERATION PAYS

Tenth, horse raisers must appreciate more fully the value of community coöperation. Each essential previously mentioned is important, but horse production can never reach its full achievement without the combined effort of the community. The township is probably the most desirable unit for coöperation, as a unit of this size insures a more definite community ideal and greater concentration of effort. The aim of the township association should be to raise one type of horse, preferably of one breed, patronizing and tolerating only good, sound purebred sires.

The value of community coöperation in raising live stock is well illustrated by the experience of certain farmers in an Oklahoma county. Only a few years ago there was not a purebred shorthorn in that particular county. Today it has 26 breeders of shorthorns and recently 12 buyers from eight states visited this county during a single day for the purpose of purchasing shorthorn cattle.

Emmet Skinner, former Aggie football captain, who accepted a commission as second lieutenant in the marines a short time ago, has passed the examination for a first lieutenantcy.

AID TO KANSAS FEEDERS

(Concluded from Page One)

time was \$27.61. These figures are based on the cost of feeds, interest on investment, taxes, labor charges, and the ordinary losses.

MARKET FOR WASTE MATERIAL

A considerable quantity of the material used would have been wasted if the cattle had not been used for its marketing. The cattle in this way furnished a market not only for the farm products but also for all by-products produced in connection with the usual systems of grain farming in Kansas.

The table is almost self-explanatory. The calves used were the first crop from a group of heifers. During the summer of 1916 they were on very short pasture, hence the average weight of 340 pounds is decidedly below what is usually expected. The fire which destroyed the feeding sheds caused a decided setback, consequently the average gains are not up to those which are usually secured.

FEED LIMITED AT START

During the first three months of the feeding period the grain ration was limited to the same quantity in each lot. After this each group was fed according to appetite. Cottonseed meal was fed the first three months and linseed meal during the last three months of the experiment. Feeds were charged at the average market prices during the time the experiment was in progress. As a considerable quantity of the feed was produced on the college farm and a still larger quantity purchased before the advance in values, the profits indicated represent less than half the actual profits to the institution.

The most rapid gains were made in the lot which was fed on ground barley. There was little difference either in the cost of gain or in the profits secured from feeding alfalfa hay cured in good condition as compared with the ordinary brown or stack burned alfalfa.

WHERE PROFIT WAS GREATEST

Lot 28, fed on sweet clover hay, returned the greatest profit of any of the lots. This was due to the fact that the sweet clover used was of the finest quality and cured in excellent condition. The alfalfa would grade as standard alfalfa on the market.

The addition of silage to the rations which were used proved to be advantageous in increasing the profits and the finish of the cattle.

Black alfalfa, used in the last lot, was stacked immediately after the mowing, the outside of the stack being green. Then a strip of moldy material was followed by very brown alfalfa almost in the form of silage, and the center of the stack was completely charred. This feed is charged at \$5 a ton because of the large amount of moisture contained. The results indicate that it is not a profitable method of curing alfalfa for feeding to beef cattle.

CONTINUED FOR SIX MONTHS

This experiment was continued for six months, sufficient time to determine the comparative value of feeds—the

purpose of the experiment. The yearlings, however, were not finished but will require from six to eight weeks more of full feeding in order to make them prime.

No credit is given to the various lots for the amount of pork produced in connection with the feeding of the cattle, although hogs were in the lots at all times to prevent waste. No credit is given to the value of the manure which was produced in connection with the feeding operations.

CONSIDERS ONLY FEEDER'S PROFIT

In this experiment the average profit secured by the farmer in the growing of crops is charged against the cattle. The feeder's profit is the only one under consideration. In practice it is found that the chief profit which comes to the cattle feeder who is also a land owner is due to the increase in the yield of crops per acre and in the maintenance of the fertility of the soil.

The cattle have done their share when they pay for themselves and the feed consumed. Any additional profit secured is due to the ability of the feeder and to his judgment in making use of favorable opportunities for the purchase of feed and putting in practice the best information which he can secure in the growing of crops for cattle feeding purposes.

DEPARTMENT MAKES RECORD

In introducing Professor Cochel, who explained the experiments, Doctor Waters said that in the last five years, due to the influence of the agricultural faculty, 85 per cent of the graduates in animal husbandry have gone back to the farm. Six years ago the live stock holdings of the college inventoried \$50,000. This spring the inventory showed a little more than \$300,000 worth of live stock belonging to this institution, including the branch stations.

Much live stock has been bred and developed here and aside from one stallion the college has not paid more than \$500 for any animal it owns. Last year the average price received for the bull calves sold was more than \$500. Sires which were bred and produced at the college now stand at the head of herds in half a dozen of the agricultural colleges of the country. Within the last two years the department has sold stock to more than half the states in the union. Professor Cochel has headed the department since 1912.

DYKSTRA IS EXAMINER FOR VETERINARY RESERVE CORPS

Kansas Graduates Are Sought for Important Branch of Army Service

Prospective Kansas recruits for the United States army veterinary reserve corps will be examined by Dr. R. R. Dykstra, who has been appointed special examiner. The government has asked for 2,000 volunteers and it is hoped that a large number of Kansas graduates in veterinary medicine will respond to the call.

Examinations may be taken at any time. Application blanks may be had by applying to Doctor Dykstra.

L. C. Moser, senior in industrial journalism, made the Memorial day address at Courtland, his home town.

CATTLE FEEDING EXPERIMENT

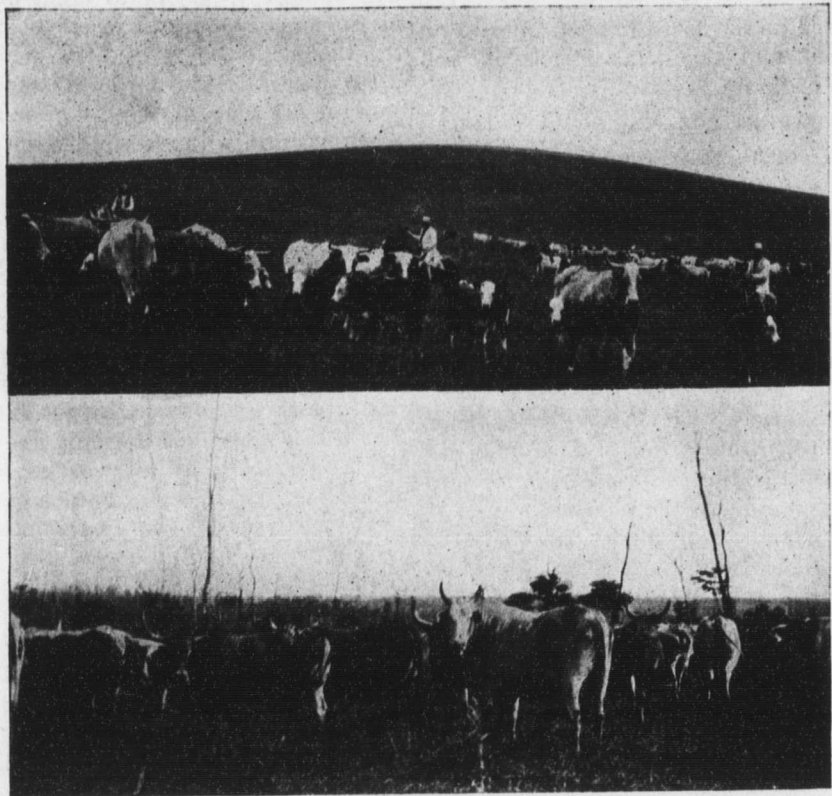
December 1, 1916, to May 30, 1917

RATION	LOT 24 Ground Barley, Oil Meal, Alfalfa Hay (brown), Silage	LOT 25 Shelled Corn, Oil Meal, Alfalfa Hay (brown), Silage	LOT 26 Shelled Corn, Oil Meal, Alfalfa Hay (good color)	LOT 27 Shelled Corn, Oil Meal, Alfalfa Hay (brown)	LOT 28 Shelled Corn, Oil Meal, Sweet Clover Hay	LOT 29 Shelled Corn, Oil Meal, Alfalfa (black)
Initial weight	338.6 lbs.	342.1 lbs.	334.5 lbs.	334.7 lbs.	342.6 lbs.	338.6 lbs.
Final weight	719.9	682.4	688.3	684.8	698.8	690.7
Total gain	381.3	340.3	353.8	350.1	356.2	252.1
Average daily gain	2.12	1.89	1.96	1.94	1.97	1.45
Average daily ration:						
Grain	7.32	6.63	7.39	7.39	7.38	6.65
Oil meal	1.32	1.19	.49	.49	.49	.49
Hay	4.05	4.05	7.82	7.82	7.32	14.45
Silage	7.75	7.75				
Cost of feed per day	\$.24	\$.202	\$.216	\$.216	\$.212	\$.18
Cost of 100 pounds gain	11.34	10.68	11.01	11.10	10.71	12.36
Cost of feed per steer	43.20	36.36	38.88	38.88	38.16	32.40
Initial cost of steer at \$8.50	28.78	29.07	28.43	28.45	29.12	28.78
Total cost of steer	71.98	65.43	67.31	67.33	67.28	61.18
Final cost per cwt.	10.01	9.59	9.77	9.3	9.62	10.18
Final value per cwt.	10.20	10.35	10.25	10.35	10.50	9.60
Final value of steer	73.43	70.63	70.55	70.88	73.37	57.67
Profit per steer	1.45	5.20	3.24	3.55	6.09	-3.51

Fourteen steers were in each lot. They were fed 180 days. Alfalfa hay used in Lots 24, 25, and 27 was brown (stack burnt) and medium coarse; that used in Lot 26 was of good color, same quality otherwise. Sweet clover hay used in Lot 28 was the first year's growth, of very fine quality and excellent color. Black alfalfa used in Lot 29 was stacked immediately after cutting without being cured. Cottonseed meal was used the first three months, linseed meal was used the last three months.

Prices used for feeds: corn, \$1.12 per bushel; barley, \$1.06 per bushel; alfalfa hay, \$15 per ton; sweet clover hay, \$15 per ton; black alfalfa, \$5 per ton; silage, \$5 per ton; linseed and cottonseed meal, \$45 per ton.

CATTLE FROM THE SOUTHERN CONTINENT



Above—Native Brazilian Cows with Calves at Side by Bulls from the States
Below—Native Brazilian Grass-Fat Cattle

TO GO BACK TO EUROPE

BRAZILIAN TRADE WILL NOT STAY WITH UNITED STATES

North Americans Have Not Shown Proper Confidence in Southern People, Points Out Cattlemen—Big Opportunities for Young Men

American trade with Brazil will be dropped in a hurry as soon as the European countries are again in a position to supply South America with goods, declared Murdo McKenzie, manager of the Brazil Land and Cattle company, San Paulo, Brazil, in an address at the fifth annual meeting of cattlemen at the Kansas State Agricultural college on "South America as Customer and Competitor."

North Americans lack confidence in the people of Brazil, according to Mr. McKenzie. The people have to pay for their goods before they are shipped. It takes 3½ months to get them, and much material is damaged because of careless packing. In many cases, moreover, those who order receive just anything the manufacturers care to dump off on them and not the articles wanted.

MUST ELIMINATE TUBERCULOSIS

"There is one thing that you must learn before you can do much in the cattle business and that is to get rid of tuberculosis," said Mr. McKenzie. "So long as this exists here people of other countries will be suspicious. This country can supply as good cattle as one can get in any part of the world, but what is the use of raising good cattle if they are affected with such a disease?"

"Brazil has a large quantity of land well fitted for stock raising. A great variety of crops can be raised from this land, and cattle can be raised easily on the grassy plains. Artificial feeding is not necessary as there is always green grass in the pastures. Fat cattle can be shipped off this grass in the middle of the winter—something you can't do in any other part of the world as far as I know."

LAND AT LOW PRICE

"We bought 750,000 acres of land for 29 cents an acre, including government taxes. There is no land in Kansas that will beat a large tract of land I bought for 89 cents an acre. It will grow corn, beans, rice, coffee, bananas, sugar, cotton, and if there is anything it won't grow, I haven't heard of it. And we haven't got all the good land—there's lots more of it. Considering its quality, Brazil probably has the cheapest land in the world."

"Brazil ranks among the largest breeding countries of the world. Last year there were 26,000,000 cattle in that country. The present prices of cattle weighing 450 to 500 pounds for feeding and fattening purposes is \$20 to \$30. Hogs weighing 350 to 400 pounds, \$40 a head. There is no demand for small hogs. The hog with the most fat on

him, is wanted. It is peculiar that the natives will not eat fat beef but they want fat pork."

EASY TO RAISE HOGS

"Hog raising is important in Brazil. Hogs are easily raised and free from disease. All the well known breeds thrive well. There is no other country in the world where you can get pigs to thrive as they do there. We raised a bunch on pasture, then put them on hard feed for 60 days. When they were ready to ship they weighed 398 pounds."

"There is no hog cholera, few ticks, no blackleg, and in fact there is not nearly the loss from any disease that you have in this country."

"Brazil both as consumer and as producer is one of the best opportunities for the young man of America that I have ever seen. But if you come to South America to succeed, you must make up your mind to stay."

LIVE STOCK BUSINESS CENTERS IN MARKETING

Producers Should Get Together, Urges Former Governor Stubbs in Address to Stockmen

The whole proposition of stock raising centers in the marketing of the stock after it is raised, in the opinion of W. R. Stubbs, former governor of Kansas and president of the Kansas Cattlemen's association. Mr. Stubbs spoke at the fifth annual cattlemen's meeting at the Kansas State Agricultural college Friday.

"It is no trouble to raise all kinds of beef and pork, but the question which I think is the biggest in the live stock business is a permanent market at a fair price," said Mr. Stubbs. "Prices are too high. There are millions in this country who can't eat meat now."

"Prices are too high from a producer's standpoint. Because of the war we may get food prices for our stuff this fall but during the last few years cattle have frequently been sold at a loss of several dollars a head."

"The man who produces live stock and the farmer who raises a lot of other food products do not get much more than half of what the consumer pays for them. Producers have to get together. You cannot get an organization without time and money. I think it would be well to have an organization charging 5 cents a head on cattle and 2½ cents on hogs and sheep, and thus having sufficient financial aid."

"Cattlemen will come to a place before long where they will feed calves from the time the animals leave their mothers, and ship them out when they are five or six months old. When cattle are marketed at an early age it will take a lot more of them. I believe that on this basis the cattleman has got more day light than in any other way I can see."

SELF FEEDING FOR HOGS

EXPERIMENT AT COLLEGE SHOWS VALUE OF METHOD

Less Labor Is Required and Return Is Greater—Valuable in Handling Forage Crops as Well as Concentrates

Self feeding of fattening hogs is rapidly increasing because of the scarcity of farm labor, the high market prices of hogs, and the high prices of feeds.

Self feeding experiments at the Kansas Agricultural Experiment station have given interesting results. Ninety Duroc Jersey pigs were fattened for market. They were divided into 15 lots, three of which were hand fed and the others self fed—some on pasture and others in dry lots.

The pigs were started in the experiment with an average weight of 50 pounds and were fed to make an average gain of 150 pounds a pig for each lot.

BRING BETTER SALE PRICE

The self fed pigs in the dry lots were ready for market earlier, required less labor, gave greater returns for feed consumed, and based upon the averages of the Kansas City market for the last five years would have sold for 25 cents more per hundredweight at the time they finished in the experiment.

Adding to the gain in market price the saving in feed, which amounted to 99 cents a head, and the saving of labor which at the lowest estimate, when as many as a car load of hogs are fed, would amount to one hour a pig, there resulted a gain of approximately \$1.65 a head.

TWENTY TO SELF FEEDER

The average self feeder will accommodate at least 20 head of pigs through a feeding period similar to the one in this experiment. With the advantage of \$1.65 a head, \$33 may be credited to the self feeder above the net returns from 20 hand fed pigs.

The self fed pigs on alfalfa and rape pastures were ready for market only one and a half days earlier than those in the dry lots but the pasture allowed in three months a saving of 67½ cents' worth of concentrates a pig. The pigs were pastured on alfalfa at the rate of 18 an acre, which gave a surplus of forage. This shows a return of \$12.15 an acre for the alfalfa pasture. Two cuttings of hay had been removed before the feeding period began. Figured on a five months' pasturing season, there is a return of \$20.25 an acre.

WHEN HOGS WERE PASTURED

The rape pastured pigs were pastured at the rate of 24 an acre but with a slight shortage of rape during the latter part of the feeding period. Based upon the saving of concentrates, the rape pasture gave a return of \$16.20 for the three months' feeding period. Figuring for a four months' pasturing season there is a return of \$21.60 an acre.

The Kansas state board of agriculture has reported the average net profits of an acre of alfalfa hay for Kansas when fed on the farm as \$13.44 to which should be added the value of the manure, when sold from the farm as loose hay, \$13.19 and when sold as baled hay, \$13.36.

The self feeder therefore has proved to be both a labor and a money saver not only in the feeding of concentrates to hogs but in the handling of forage crops.

BETTER THAN CORN ALONE

In testing the efficiency of concentrates when fed with alfalfa pasture to fattening pigs, it was found that corn, shorts, and tankage gave an advantage of \$7.83 an acre when compared with corn, and \$4.05 when compared with corn and shorts. These results are based upon pasturing at the rate of 18 pigs an acre. The comparison of returns does not fully explain the advantage gained in the use of corn, shorts, and tankage with pasture. With this ration more pigs could have been pastured on an acre while fewer than 18 pigs should have been pastured when corn alone was used.

The corn fed pigs grazed closely and practically ruined their pasture by rooting, while those in the corn, shorts

and tankage lots left an abundance of alfalfa and rooted little.

Another phase of self feeding fattening hogs which demands consideration is the "free choice," or "cafeteria," system.

In this experiment the free choice pigs in the dry lot made their average of 150 pounds gain at a cost of 18 cents less per pig than the dry lot pigs with the mixed ration. This was done with a saving of eight days' time, which saved labor and enhanced their selling value, considering the average decline in fall market prices of hogs.

DOESN'T BALANCE RATION

The results secured in the alfalfa lots are the reverse of those in the dry lots. Evidently the pig's appetite is not the most efficient guide for balancing his ration when full fed on alfalfa pasture. His appetite for alfalfa seems to dull his instinct as a dietitian when helping himself at the self feeder. He naturally has a pig's appetite for corn and when this is satisfied on top of a good feed of alfalfa, there isn't much room left for shorts and tankage. Not enough tankage is consumed to balance his ration properly and as a result his gains are more costly and he gets to market behind the pig which is forced to eat shorts and tankage with the corn.

Further facts concerning the experiments are obtainable from the animal husbandry department, Kansas State Agricultural college.

LIVE STOCK GATHERING PLEASES PRACTICAL MEN

Prominent Kansans and Others Express Interest in Work Done in Animal Husbandry

That the annual cattlemen's meeting at the agricultural college June 1, together with the work done for the stockmen of Kansas by the animal husbandry department is appreciated, is indicated by complimentary remarks heard on all sides.

Following are some of the expressions of praise:

W. J. Kennedy, Sioux City, Iowa, formerly head of the department of animal husbandry, Iowa State college: The work in beef cattle done by the animal husbandry department of the Kansas State Agricultural college is the best beef cattle work done by any college in any state or any country. If the people of Kansas will put half of what this college has worked out into actual practice in their farming operations they will do twice as much as they are doing now.

P. W. Goebel, Kansas City, Kan., president of the American Bankers' association: This meeting has a great educational influence on the people of the state.

W. R. Stubbs, Lawrence, president of the Kansas Cattlemen's association and former governor of Kansas: I consider these meetings exceedingly important to the cattlemen of the state.

W. G. West, Wichita, deputy live stock commissioner: I am strong for it. I think it is an exceedingly valuable thing.

L. M. Simpson, McPherson, state senator: The cattlemen's meeting is a wonderful thing for Kansas.

F. R. Hedrick, Kansas City, publicity manager: These meetings are of untold value to the people of Kansas.

Alexander Phillips, Hays, farmer and cattleman: These meetings are of great importance to the cattlemen of the state.

E. P. Sessions, Fort Bidwell, Cal., Shorthorn and Hereford breeder: A fine meeting and a great benefit to the state.

Dan D. Casement, Manhattan, Hereford breeder and feeder: We have an unusual program this year and a remarkable opportunity to get valuable information.

W. J. Tod, Maple Hill, Hereford feeder: It does an immense amount of good.

B. F. Howard, Cottonwood Falls, Shorthorn breeder: It is a fine thing for the people of Kansas.

Stewart Simpson, McPherson, Duroc-Jersey breeder: We find out a lot of things here that we can use in a practical way.

SHOP AS IN OLD DAYS

HOUSEWIVES MAY WELL ADOPT MARKET BASKET PLAN

Would Reduce Cost of Meat 15 to 20 Per Cent, Says Buyer for Big Packing Plant—Stock Shipments Should Be Distributed

That housewives should return to the old market basket plan of shopping and thus reduce the cost of meats, was the suggestion of T. H. Ingwersen of Chicago, for 28 years a cattle buyer for Swift and company. Mr. Ingwersen spoke on "The Cattle Buyer's Viewpoint," at the fifth annual cattlemen's meeting under the auspices of the Kansas State Agricultural college.

"If the housewife would revive the old basket habit, do her own selecting of the family's daily meat supply, pay for the same in cash instead of buying on credit, and carry the meat home, the consumer would save 15 to 20 percent of the meat bill," said Mr. Ingwersen. "By eliminating this unnecessary expense of delivery, telephone service and losses on credits, the retail butcher could make just as much as under the present system."

MUST DELIVER 10-CENT PARCELS

"Often the housewife discovers she has forgotten some small article when the meats are delivered. She again telephones the butcher, orders some article that costs 10 to 15 cents, and Mr. Butcher has to make another delivery in order to hold her trade."

The packers are an important factor in the upbuilding of the cattle industry, in the opinion of Mr. Ingwersen. Land values, furthermore, have increased in localities or states in which slaughter houses and stock yards have been established, he pointed out.

WHERE SHIPPERS MAKE MISTAKE

Shippers of cattle make a serious mistake in putting most of their stock on the market two days in the week, contended the speaker.

"In Chicago," he said, "these two days are Monday and Wednesday. Often the receipts of live stock on these days are so heavy that violent fluctuations occur. The packer needs the live stock and he will buy just as willingly on Tuesday, Thursday, and Friday."

"How long would farmers last and how much profit would they make if they cultivated corn only on Mondays and Wednesdays? It would be necessary to keep additional help in order to do this, and this help would be idle the rest of the week."

RAILROADS ARE OVERWORKED

"The railroads are overworked—they cannot get all of the stock to market on time. The stock yards company cannot give the stock the best attention, the commission man is naturally more anxious to sell, and the cattle buyer is only human and will buy as low as he can if he is given the opportunity."

"If shipments were distributed more evenly—shipping live stock for Tuesday, Thursday, and Friday markets—it would be of great benefit to everybody concerned in the live stock industry and would create a steadier market. There would be fewer violent fluctuations."

FUEL AS WELL AS FOOD DEMANDS CONSERVATION

Factories Will Need Great Quantity and Household Should Economize

Save fuel as well as food. This is the advice of the committee on utilization and economy, Kansas council of defense. Enormous quantities of fuel will be needed in factories, it is pointed out, and the household will be doing patriotic service by economizing on fuel.

In gas districts, there is a tendency to wasteful use of gas, the committee asserts. Economy in gas should now be the rule.

Home consumption of fuel can be much decreased by the wider use of the fireless cooker. These cookers not only save fuel, but save the time of the housewife. It is possible with little effort and expense to make a satisfactory fireless cooker, if the manufactured types are not available.

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JUNE'S TIME TO PRUNE

YOUNG ORCHARD SHOULD BE TREATED THIS MONTH

Branches Have Made Most of Their Growth for the Year, and Rest of Season Will Be Used for Storage and Development

June is the month for pruning the young orchard, in the opinion of George O. Greene, specialist in horticulture in the division of extension, Kansas State Agricultural college.

The branches should be thinned, undesirable twigs and limbs removed, and the tree made to grow in the shape desired. The branches and twigs have made most of this year's growth, and the remainder of the season will be used to ripen the wood, to store plant food, and to develop leaf and fruit buds for next year.

Cutting back the long, slender upright branches to an outside bud or twig and thinning out the great number of branches which the tree has started but which will be of no future value to the tree, will reduce the leverage the wind has on the tree and insure a uniform upright tree instead of a tree leaning to the north with a few limbs going toward the south.

DOESN'T CHECK GROWTH

The statement is often made that trees are pruned in June for fruit because June pruning checks growth. Summer pruning checks growth only in that part which has been removed, in the opinion of Mr. Greene.

The removal of a part of the growing points and the cutting back of the terminal growth throws more growth and nourishment to the laterals farther back on the more mature branches and thus develops fruit buds instead of permitting all the nourishment to go to the development of leaf buds farther out on the limbs.

Cutting back the tree and making it spread while it is young develops a more stocky trunk and insures a better tree than the more slender, neglected one. Plant food that would ordinarily go into leaf and twig growth late in the season will be used to develop the trunk and scaffold limbs. The amount of this development will depend on the number of fruit buds being developed, the amount of growth the tree has made during the early part of the season, and the extent of the leaf surface during the early part of the season.

PRUNING FOR EARLY FRUITAGE

Summer pruning should not mean a severe cutting of wood from the inside of the tree if early fruitage is desired. The slender, slow growing laterals should rather be shortened so that they may develop fruit spurs and fruit buds as early as possible.

On large areas where much pruning is to be done and the shape of the tree is of more importance than early fruitage, these young twigs are often entirely removed and all subsequent growth thrown into the main scaffold limbs.

In any case, the future development of the tree and the selection of scaffold limbs that will not split when in fruit are of prime importance.

FOR OLDER ORCHARDS, TOO

In older orchards where the set of fruit is heavy in spite of a top too dense for the best production, the size and quality of the fruit and the chances of a crop next year may be improved by judicious use of the pruning saw and shears in June. Thinning the branches of this type of tree will insure larger, better colored fruit and will prevent evaporation this year.

The great tax on any plant is in ripening the seeds. If one can reduce their number and get as many bushels of fruit he has saved much plant food for next year's crop.

In June the peach trees need thinning and the strong growing branches

cutting back so that they may produce laterals. On these laterals from strong growing shoots of this year's growth one may expect the best production of fruit next year. The thinning out of the dense top will insure plenty of nourishment for what is left.

APPEALS TO COUNTIES IN BEHALF OF LIBERTY LOAN

President Waters as Head of Defense Council Points Out Importance of Bonds

Subscribe to the Liberty loan, is the appeal of Dr. H. J. Waters, president of the Kansas council of defense, in a letter sent to the chairmen of all county defense councils in the state.

"Reports indicate," writes Doctor Waters, "that Kansas is not subscribing her share of the Liberty loan. Nebraska, with less per capita wealth and with a smaller population, has already subscribed, it is stated, a larger sum than Kansas."

"Our sons have been called to lay their lives upon the altar of their country. The least we can do is to furnish funds and food. W. S. Gifford, director of the council of national defense, says in a telegram received today: 'I earnestly request the best efforts of the Kansas council of defense to complete subscriptions to Liberty loan during the time now remaining. Success is still dependent on your efforts and upon that of other states throughout the country.'

"Only three more days remain. Will you not, through your township and community organizations, appeal to every citizen of your county to subscribe for as many bonds as his financial condition will warrant? Patriotism and a high sense of duty call us all to service."

CHARLES A. SCOTT ENTERS UPON COMMERCIAL WORK

State Forester Will Specialize in Evergreen Culture—Successful Service in College

After seven years of successful service as state forester and professor of forestry, Charles A. Scott has resigned to enter commercial work.

Mr. Scott was graduated from the Kansas State Agricultural college in 1901, and took graduate work in Yale university. He has been in the government service and has been on the faculty of the University of Nebraska, the Iowa State college, and the Kansas State Agricultural college. He has built up the forestry work here along thoroughly progressive lines, and his work has attracted much attention.

Mr. Scott plans to develop an extensive evergreen nursery in Manhattan, carrying trees for general planting as well as evergreens for ornamental use. He will maintain a greenhouse also, having purchased the property of Henry Moore, who was graduated from the college in 1894.

FARM BUREAUS ORGANIZED IN THREE MORE KANSAS COUNTIES

Anderson, Franklin, and Norton People Adopt Progressive Plan

Complete farm bureau organizations have been effected in Anderson, Franklin, and Norton counties.

Roy M. Phillips, extension dairyman in the State College of Washington, has been selected as the county agent for Anderson county. Mr. Phillips is a graduate of the Kansas State Agricultural college.

F. J. Robbins, who was reared on a ranch and who is also a graduate of the agricultural college, is now at work as county agent in Franklin county.

Norton county has not yet selected its county agent but will do so soon. Norton will be the twenty-first county in Kansas having a farm bureau and county agent.

KEEP AT GARDEN WORK

IT WON'T PAY TO LET UP IN THE SUMMER SEASON

Cultivation and Care Are Needed Most in Hot Weather, Says Professor Ahearn—Thinning and Watering Are Important

Keep everlastingly at it! Now that the garden has been planted, start the fight on weeds and insect pests and keep it up throughout the whole season. Don't be a quitter in the campaign for increased food production, is the advice of M. F. Ahearn, associate professor of horticulture in the Kansas State Agricultural college.

"Many persons lose their enthusiasm in garden work in hot weather, when cultivation and good care are needed the most," said Professor Ahearn. "Individuals usually find it easy to garden in April or May, but mighty hard work in July or August. 'Cultivation, first, last, and all the time,' should be the slogan of every patriotic man and woman."

USE EFFICIENT TOOLS

"In cultivating use efficient tools, either hoes and other hand tools or horse cultivators, depending on the size of the garden. Cultivation is important, for it saves moisture, kills the weeds, admits air into the soil and increases the supply of plant food."

Thinning is a necessity for many garden plants, particularly lettuce, spinach, onions, beets, parsnips, carrots, and radishes, pointed out Professor Ahearn. It has been found by experience that it is practical to thin out plants two or three times in a season. This gives more uniform plants and a better, stronger growth.

SPRINKLE VEGETABLES IN EVENING

Watering is another important point. It is advisable to irrigate or sprinkle vegetables in the evening to prevent loss of moisture through evaporation. A good plan for a small garden, is to make shallow furrows with a hoe and allow the water to run into these shallow ditches between the rows. Save the moisture by cultivation whenever possible.

Insect enemies are also to be guarded against in the garden. The flea beetles attacking the radish, can be killed by dusting with one part powdered arsenate of lead mixed with 10 parts of flour, or with arsenate of lead dissolved in water at the rate of one ounce to one gallon of water. The green aphid, which sucks the sap on under side of leaves, is best controlled by black leaf 40 applied at the rate of one teaspoonful to a half gallon of water plus a small piece of soap. One pound of soap to six gallons of soft water will also control it.

MAID HENRY PONTIAC IN KANSAS BUTTER RECORD

Produces 487 Pounds of Milk in Week—Was Bred and Is Owned by Agricultural College

A state record for seven day production of butter has just been made by Maid Henry Pontiac 200,383, a five-year old Holstein cow owned by the Kansas State Agricultural college. Her record for seven days was 487.3 pounds of milk and 22.4 pounds of butter fat, equivalent to 28 pounds of butter. The average butter fat test for the seven days was 4.6 per cent.

Maid Henry Pontiac was bred and is now owned by the Kansas State Agricultural college. She has right by inheritance to be a great cow. Her mother was the famous cow Maid Henry 54878, which at 11½ years of age made the state record for yearly butter fat production and has held this position for more than five years. Her record for a year was 19,600 pounds of milk and 716 pounds of

butter fat. Maid Henry has another daughter with a record of 28.7 pounds of butter in seven days.

The sire of Maid Henry Pontiac, Sir Carlotta Pontiac Cronus 45502, a grandson of Hengerveld DeKol, is senior herd sire at the college. His sire has several daughters with good records. One daughter produced 23,503 pounds of milk and 768.6 pounds of butter fat in one year. Another produced 22,593.5 pounds of milk and 708.7 pounds of fat in one year. Several others have fine yearly records.

Sir Carlotta Pontiac Cronus, the sire of Maid Henry Pontiac, has a grade daughter in the college herd that recently produced 25.2 pounds of butter in seven days. He also has three other daughters in the herd with good yearly A. R. records. One produced 16,417.9 pounds of milk and 543.94 pounds of fat in a year; another produced 14,638.9 pounds of milk and 486.97 pounds of butter fat; and a third produced 9,551.2 pounds of milk and 356.53 pounds of butter fat with her first calf.

Maid Henry Pontiac is an extremely large cow. She has weighed more than 1,900 pounds. During her first lactation period she produced 11,686.8 pounds of milk and 415.8 pounds of butter fat. With her second calf she produced 14,521.8 pounds of milk and 515.9 pounds of butter fat. It is possible that she will make a better record this year than her mother made.

KEEP MACHINERY BUSY WHEN WEATHER ALLOWS

Scarcity of Labor and High Prices for Food Products Are Incentives this Year

Make hay while the sun shines—keep your machinery busy whenever weather conditions permit. Scarcity of labor and high prices for food products are incentives to follow out the old maxim, believes the horse and machinery committee of the Kansas council of defense.

Loss of time due to poorly repaired machinery, the committee points out, frequently means loss of part of the crop. Repairing can be done at odd moments and on rainy days so that the machines will be ready to start work at any time. For example, if it is decided suddenly to cut hay, the farmer will not need to spend several hours in getting the mower, the rake, and other implements ready.

In ordering repairs it is best to give the number of the machine, the year purchased, the number of the part, and the exact address of the person to whom the repairs should be sent.

Many farmers are finding that it saves time to keep a few of the more important repairs on hand, such as sections and guards for the sickle for binders and mowers, shares for plows, and spark plugs for the tractors. These are not expensive and if one of these parts breaks a new one can be put on with little loss of time.

When through with any machines, such as corn planters and listers, for the season, it is an excellent plan to tag all the parts that should be replaced before machines are used again. Then in the fall it is well to order all of these parts and have them put on in the winter. This makes it possible to have the machines ready for use long beforehand. It makes it possible also to get the repairs when ordered instead of waiting until spring when time is valuable.

The probable shortage of implements means that old machines should be kept in the best of repair and that new machines should be purchased some time before they will be used. With a labor scarcity, difficulty in obtaining steel, and congested freight, it may be good business policy to buy all machines needed for the next 12 months or to make the necessary arrangements to buy each machine later.

STUDENTS TO BUY BONDS

COLLEGE MEN AND WOMEN WILL HELP FINANCE WAR

President Waters and Doctor Macarthur Present Proposition at Mass Meeting—Faculty Members Have Subscribed Liberally

Students of the Kansas State Agricultural college are showing their loyalty to the government through the purchase of Liberty bonds. Arrangements have been made whereby it is possible for them to buy bonds on the instalment plan.

Much enthusiasm was shown by the students at a mass meeting when the plan was explained by Dr. Henry J. Waters, president of the college. Teachers and other employees of the college have already responded liberally, and the senior class as a body has subscribed for six bonds.

"There has been submitted to us a proposition to lend the government some money," said Doctor Waters, "and we have not subscribed to this proposition as rapidly as could be expected. In failing to realize our responsibility in regard to the Liberty bonds, we are encouraging the enemy."

HAVE FOURTH OF WORLD WEALTH

"We are going to raise money to finance this war and it is just a question whether we shall raise it in such a way that part of it may be paid by the generations to come or whether we are going to pay it all as we go. It is not a question as to whether we are going to raise the money, because if this loan should fail, congress would immediately tax the people heavily and the money would be raised."

"We will have only started to encumber ourselves when this loan is raised. We have one-fourth of all the wealth in the world. Our gold reserve is greater than that of France, England, and Russia combined. We produce four times as much corn as is grown elsewhere in the world. Our fuel wealth is several times greater than that of the rest of the world combined. If our live stock could be rounded up and divided among the families of the United States there would be five hogs, three cattle, two sheep, one horse, and countless chickens, ducks, geese, and turkeys for each family, with 4,000,000 mules to spare."

IS DUEL BETWEEN RESOURCES

This war is a vast duel between the resources of the belligerents, asserted Dr. J. R. Macarthur, professor of English in the college, who discussed the practicability of the Liberty bonds.

"Investment in bonds is better for most people because bonds as a rule are safer than stocks," said Doctor Macarthur. "The desired amount in Liberty bonds will be raised if we realize why we are fighting Germany. We are fighting the German government, not the German people. We are fighting the German government because it has attacked us and we must defend ourselves if we would maintain a democracy."

"Conscription is one of the most democratic moves our government has ever made. Last Tuesday was one of the greatest days in our history. But are we going to let the flower of the nation fight and die that we may enjoy prosperity and liberty and not make an effort to do our part? I believe that there is not a man or woman, student or faculty member, in the Kansas State Agricultural college, who would not make every sacrifice in his power. This bond issue is the first time we have had to show this willingness."

Miss Margaret Hale of the public speaking department gave several attractive readings.

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J. D. WALTERS Local Editor
ADA RICE, '95, M. S. '12 Alumni Editor

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WEDNESDAY, JUNE 13, 1917

EFFICIENT SERVICE

The Kansas State Agricultural college would be doing much less than its duty if it failed to recognize, appreciate, and acknowledge the services of the two members who on July 1 will retire from the board having supervision of the affairs of the institution.

Both Mr. Hackney and Mrs. Lewis have been members of the board of administration since its establishment in 1913, and they have both been important factors in the steady, unifying policies maintained by the board. The services of Mrs. Lewis, as the only woman member of the body, have been especially marked along the lines which are regarded as peculiarly the sphere of woman. She has pointed out always the part that music, painting, and literature have played in the building of civilization and the part that they must play in the future if civilization is to go forward on a sound and lasting basis.

Mr. Hackney's devotion to the best interests of the institutions has many times called forth the remark and admiration of persons connected with the state schools. Broad minded but conservative, possessing business acumen and a well trained legal mind, moved by real convictions rather than by traditions, with the qualities of dominant leadership, he represents the type of public official who sticks to his job intelligently, honestly, and unselfishly. His counsel, his plans, and his knowledge of actual Kansas conditions have been of inestimable benefit to the higher education of the state.

The services of these two Kansas citizens to the state will not soon be forgotten.

NO MORE ALLIGATORS

The Cultivator has always insisted on relegating to the scrap heap the unearthly name of "alligator pear." The California Avocado Growers' association has also taken a hand in trying to correct the use of this term. The following resolution was passed at the recent annual session in Los Angeles: "Resolved, that the California Avocado Growers' association does hereby request the various papers publishing market reports to use the name 'avocado' instead of 'alligator pear' and to class the same under the appropriate head of fruits and not under vegetables."

We would also suggest that the growers unite in the matter of pronunciation. At the convention in question speakers sometimes pronounced avocado with the "a" sounded as in "cat." The "a" in the third syllable should have the sound of "a" in "father."—California Cultivator.

HOARDING FOODSTUFFS

There is urgent need for large production of foodstuffs to meet the needs of this country, to supply the nations with which we are coöperating in this

war, and in part to meet the requirements of neutrals in Europe. I believe that even after peace comes this nation will be called upon for a considerable time to meet demands for foodstuffs from abroad. It is urgent also that we conserve food and highly desirable that we eliminate waste, that the course of trade shall be free, and that there shall be fair dealing. There is no need for people to get hysterical or panicky. Hoarding of foodstuffs should be discouraged.—Secretary D. F. Houston.

MORE LIVE STOCK

A big effort is needed in Kansas in getting the young farmers interested in live stock. More importance should be given to starting with "a cow, a sow, and a mare," and building up the size of the herds with the growth in capital and experience. The older farmers, who have had years of successful experience with live stock, can be of great service if they will do more to encourage the young men to make this start.

Most young men who start into farming in Kansas have but little capital. As a rule it is but little more than is needed to buy the equipment required in a simple system of grain farming. As a result there is a temptation to delay the start into live stock farming until one has enough capital to get enough animals "to pay to fool with." Under ordinary conditions in Kansas, grain farming is not profitable, and from the very nature of things it cannot be. The natural result is that a great many men delay the start into live stock farming until they pass the point where they lose their ambition to keep live stock. Then they settle down as ordinary one crop grain farmers. When this occurs their income is much lower than it otherwise would have been, and in addition they are not of so great a productive value to society and to the state. The system that is needed is to show the younger farmers the methods of growing into live stock; the man who will start with even one female of the different classes and then keep the increase from this animal will develop into a good live stock farmer. Boys get this idea quickly; this is well shown by the success of the Capper Pig club. Any boy or young man who gets started with one sow or cow and takes a personal interest in the development of the increase will soon become a good live stock man.

But little difficulty is encountered after this start is made. The difficulty is in getting a man worked up to the start. If breeders of purebred stock were to put more effort in encouraging the farmers just starting out to get into live stock, it would do much to increase the demand for breeding animals.—Farmers Mail and Breeze.

A WAGONLOAD OF TRUNKS

A wagonload of trunks is ordinarily not an inspiring sight nor one to arouse one's feelings, yet this morning they brought sorrow and regret and that intangible fear which one experiences when facing the unknown.

Twenty-six balmy months of June have passed, taking with them their exodus of joyous, expectant and enthusiastic young men and women, since we first came to Lawrence. We have seen the students go in the early summer and some of them return in the fall, with no special feeling other than a general interest in their welfare and an occasional longing that such days might also return to us.

But this year it is decidedly different. Undemonstrative usually in such matters, at this time we should like to grasp the hand of every boy and girl and wish them God's blessing. Plans of parents and plans of youths alike have been set aside by the stern realities of the present and many boys who have looked forward to constructive work in the arts or sciences now await their country's call, ready to serve they know not where, but to give such an account of themselves as shall make the history of the future as radiant as that of the past, filled with a record of intelligent action and heroism. And the girls, who also had their plans, just as heroically face the

future determined to sustain in every possible manner their friends, associates and loved ones.

Many of these trunks will return in the fall and with them will come the boys and girls ready for another year's hard work that they may be better citizens, when the time comes for them to take the place that mother and father occupy today. Some of these trunks may be used at home while the owner goes about his workaday task, doing his part to make the nation rich and powerful, but still others will become dusty and old, while their owners fight in the trenches of Europe for worldwide freedom.

And so the sight of the load of

not used in the brewing or distillation of alcoholic beverages. It is safe to assume that it was not Boozie that put May wheat above three dollars a bushel.

There is one thing that the farmer has perhaps not thought about particularly—and that one thing is answered by certain feed products, sometimes called "brewery slop" and sometimes called "distillers' grains." Several of the well known stock feeds use distillers' grain as one of the necessary ingredients. Most of the distillery companies, and especially those in Illinois and Kentucky, find stock raising a very profitable side line. Some of them raise cattle and some raise hogs. This is made possible because it is

Guard the Boys

Governor Arthur Capper

OUR Kansas boys are responding to their country's call in the way Kansas always responds in national emergencies. The war department records at Washington show that Kansas is ahead of all other states in filling its quota for the army, for the navy, and for the national guard. By the end of this year, 30,000 of the finest, cleanest, manliest boys—the flower of the state's young manhood—will be marching with the colors.

The mothers and fathers of Kansas are offering these brave sons in the true Kansas spirit—in the spirit of heroism and sacrifice and devotion to their country.

Now in that same spirit, in the name of these loyal fathers and mothers, and in the name of the best citizenship of Kansas and all that is right and just, I am demanding of President Wilson and the war department that every power of the federal government, civil and military, be invoked and exercised to guarantee to these boys the best possible environment, morally and physically, that they may be returned to their homes at the close of the war sound, clean, wholesome, sober men. I am demanding that congress and the war department maintain a safety zone of not less than 10 miles around these camps, in which the traffic in liquor and vice shall absolutely be prohibited by the government.

This much, at least, is due these boys, is due these mothers and fathers, is due the people of Kansas, the state which has done more than any other to maintain and promote the highest standards of decency and sobriety in the daily life of its people.

The records of former wars show that conditions of intemperance and vice surrounding the camps have been more deadly to the boys at the front than the bullets of the enemy.

These 30,000 Kansas mothers should not be called upon to suffer their sons in the springtime of their young manhood, to be made the sport or the spoil of the insidious agencies of drunkenness and disease. These mothers have a right to insist—and I know they are insisting, because already I have had hundreds of letters from them—that camp surroundings be kept free from these contaminating and debauching influences; that their boys shall not be considered fair prey by the moral pests and parasites of society, and that they shall not be returned to them broken, degraded, and shattered physically and morally.

And so I have urged the powers at Washington to give ear to this appeal from the mothers of Kansas, an appeal, it seems to me, that cannot and will not be denied.

trunks went home to the recesses of our soul and we would gather the boys and girls, as a father would a child, to protect them from the responsibilities which await them. But this thought of protection is in vain, for they must fight their own battles and in winning them will become strong and resourceful. May God be with them during the months which are to come and may the future have enough of sunshine and blessing to efface all of the uncertainty and regret of today.—Lawrence Journal-World.

BOOZE AND THE FARMER

Booze pretends to love the farmer. In return, Boozie expects the farmer to fall in love with Alcohol.

This is all based on the quantities of grain consumed by the brewing and distilling interests. The grains used in the manufacture of alcoholic beverages are corn, rye, barley and rice. The latter grain is employed chiefly in making "near beer."

The distiller and the brewer have been telling the American farmer these many years, that were it not for the alcohol industry, farming would probably not be nearly so profitable. Does the farmer believe it? Wheat is

generally admitted that after the grain has been mashed and distilled, it contains practically as much nutrition as it did originally. And if this is the case—or even if it is relatively true—the farmer simply competes with himself, doesn't he? The grain that he sells performs two services: It pays the brewer and the distiller a profit on its alcohol contents; it pays an added profit in feeding stock. Where does the farmer gain? Does he get two profits on his sale? Does the distiller ever pay him more than the market price? He simply has to compete with himself in stock raising in any event.

And today every newspaper and magazine is impressing upon the American farmer the necessity of maximum crop production. Including America, the peoples of the world who must be fed directly by American soil in 1917, and perhaps for several more years, number around three hundred million persons.

Does the farmer feel that he depends upon Boozie for a market? If he is going to fatten stock, why not use his grain to fatten his own stock? Why see it pay its double profits to the brewer and the distiller?—Successful Farming.

THE ENEMY

Amelia Josephine Burr in the Bellman

We were so certain, a few years ago, There was no evil, only lack of good. Now we are not so sure of what we know, There is a thing we have not understood, That even now we cannot understand. We have seen deeds that could not have been planned By any human brain. Strange fantasies of pain And they were not wild savages who wrought These horrors on mankind, Nor haggard zealots, to life's beauty blind, Nor the dark growths of centuries untaught.

What Apollyon's mind Could bring to such incalculable wreck The spirit of a kindly, simple man Whose life in peace and honesty began, And took its course the placid years along, Happy in simple pleasures, flowers and song, Whose toil was spent For thrifty comfort and well earned content, A man who wears today about his neck A locket with his children's pictured faces, While he

In all the places He and his brothers have left desolate There is no ruin great as this. A shrine Holier than Reims—a soul—is desecrate. The filth of lust, the poison gas of hate— What devil set them in the place divine? Here is the cause in which our all we spend. Though to our grief we rend The flesh and blood the Enemy drives before To shield him, as the Belgians' bullets tore Through their own kin to check the advancing foe, Not against flesh and blood do we contend— Against invisible and awful powers The battle that is ours, The rulers of the darkness, and the might Of evil in high places. God, send light Upon our spirits—make us brave and wise. Give us throughout Thy hard-pressed world to know The Enemy, whatever his disguise— And knowing thus, to fight.

SUNFLOWERS

Get ready, girls, it's almost warm enough for furs.

Can everything this summer, including the "can't."

Kind words of consolation to the Kaiser: Cheer up, Bill, Texas hasn't even started yet.

It is said that books on auction bridge bring almost as much as any other kind of waste paper.

The millennium is undoubtedly close at hand. A headline in the Manhattan Nationalist informs us that "all Irish parties agree."

We note with some dismay that our old friend, William Shakespeare, is spending the summer in Kansas City, where he will be glad to take pupils who wish to learn how to sing.

When Pershing's bunch gets across, the Europeans will begin to realize that America is not made up entirely of millionaires. This will be a good thing for Europe—and for America.

ADVICE

The sun is climbing northward now, Each day is getting hotter; Don't wear hot clothes, cut out rich food, Keep sweet, and boil the water.

AMONG THE ALUMNI

Mrs. Bessie (White) Vilander, '10, and young son were recent college visitors.

H. F. Roberts, M. S. '98, professor of botany in the college, is seriously ill.

Miss Virginia Sherwood, '12, has returned to Manhattan to attend summer school.

Jay Lush, '16, has been appointed fellow in genetics, department of animal husbandry.

Miss Esther Wilson, '10, who has been very ill for the past year, is much improved.

Miss Edna Pugh, '11, will teach home economics in the high school at Hutchinson next year.

Mrs. Inez (Palmer) Barrows, '96, is expecting to attend commencement exercises next week.

Miss Mary Polson, '16, who has been teaching in the high school at Paola, was a recent college visitor.

Miss Lulu L. Case, '11, is assistant bacteriologist and chemist in the municipal health department of Berkeley, Cal.

John Frost, '92, and Mrs. Frost, of Blue Rapids, were in Manhattan last week attending the Methodist district council.

Lawrence Fickel, '15, who is employed by the General Electric company at Dallas, Tex., is visiting in Manhattan.

Miss Esther Zeininger, '15, of Wichita, has been visiting her sister, Miss Daisy Zeininger, instructor in mathematics.

Miss Birdie E. Secrest, '92, of Randolph was the guest of Miss Ada Rice, '95, last week. She was a delegate to the Methodist district conference.

Mrs. Wilma (Cross) Rhodes, '04, and children are visiting in Manhattan. Mrs. Rhodes has been teaching in an Indian school at Sapulpa, Okla.

George Hungerford, a former student in industrial journalism, was a college visitor last week. He is connected with the Minden News, Minden, Nebr.

Frank W. Linscott, '91, who had a Register of Merit Jersey herd, disposed of his entire herd at fancy prices on May 31, at the largest Jersey sale held in Kansas.

Miss Alma G. Halbower, '14, has taken up her work as home demonstration agent of the Middlesex county farm bureau. Her headquarters are at Waltham, Mass.

C. J. Burson, '01, of Hewins, and Glick Fockele, '02, of Leroy, are two of the 86 men who were chosen on June 3 for training at Fort Riley because of especially high grading.

Professor Sawdon, formerly of the Kansas State Agricultural college, husband of Mrs. Adelaide (Wilder) Sawdon, '98, has enlisted in the engineering corps of the army.

Fred W. Krotzer, '11, was in Manhattan last week, called here to attend

TO THE ALUMNI

During commencement week alumni headquarters will be open in the southwest room, first floor, Anderson hall. Visiting alumni will be welcome. Call, greet friends, register, and rest.

Do not forget that there are three exercises of commencement week to which alumni are especially invited: the annual business meeting in the old chapel at 2 o'clock Wednesday afternoon, June 20; the alumni dinner at noon on commencement day, June 21, in Nichols gymnasium; the alumni reception in Nichols gymnasium at 8 o'clock Thursday evening, June 21. Plates for the alumni dinner will cost 75 cents each, and reservations should be made as soon as possible.

the funeral of his mother. He is instructor in electricity in the Central Continuation school in Milwaukee, Wis.

Mrs. Josephine (Wilder) McCullough, '98, is in Manhattan to care for her father, who is seriously ill at his home. Dr. W. A. McCullough, '98, has enlisted in the medical corps of the army.

Bruce S. Wilson, '08, who is commander of the local chapter of Sons of Veterans, had charge of the program for Decoration day. Mr. Wilson holds the honor of being vice commander for the Sons of Veterans of the state.

R. W. Miller, formerly instructor in chemistry in the college, receives the degree of doctor of philosophy this week from the University of Pittsburgh. He has accepted a position as research chemist with a large Pittsburgh corporation.

J. W. Hartley, '92, attended the Linscott sale on May 31 and purchased one of the purebred Jerseys. Mr. Hartley attended the banquet given by the business men to the visiting stock men at which an organization of Jersey breeders was effected.

The Rev. William Orr, '10, and Mrs. Eula (McDonald) Orr, '12, who are in charge of a Presbyterian mission at Isabela, Porto Rico, state that they expect to return to Manhattan in time for commencement. They were to leave Isabela on Saturday, June 9.

Clyde McKee, '10, came here last week for a short visit and to accompany his wife, Mrs. Clara (Shofe) McKee, '10, home. She has been visiting her parents on College hill for the past month. Mr. McKee is instructor in soils in the Iowa State college.

Mrs. Carrie (Gates) McClintic, '10, of Beloit was a college visitor last week. She is superintendent of the girls' and women's exhibits in the Mitchell County Fair association and she was here to secure judges for her work. Mrs. McClintic is president of the class of 1910.

G. F. Wagner, '99, has resigned his position as custodian of the college. He is a partner in the Tuttle Dale stock farm and desires to give all his time to the development of his herd of purebred Ayrshires. He is an efficient custodian, and is popular with both faculty and students.

BIRTHS

Born, to Mr. and Mrs. C. S. Conner, '09, of Phillipsburg, on June 4, a son, Randall Eugene.

Born, to Mr. E. A. Wright, '06, and wife, Mrs. Helen (Amos) Wright, Manhattan, on June 4, a son.

FOR CALIFORNIA ALUMNI

TO THE INDUSTRIALIST:

I believe there are enough Kansas State Agricultural college people around the bay to organize an alumni association but they are so scattered that they are difficult to get in communication with, so I should like for any friend of the college, who is near enough San Francisco to attend such meetings as will be held, to write me as soon as possible, so that we can have a meeting soon. The people that I have talked with here are very enthusiastic about an organization, and I am sure you will be, too. Don't neglect to write, for we want to have some good times this summer.

LULU L. CASE, '11.

1715 Bancroft Way,
Berkeley, Cal.

MANHATTAN ALUMNI

The Manhattan Alumni association of the college met Wednesday, May 30, for its annual picnic. On account of the rain, the gymnasium was used and the children of the crowd pronounced it better fun than out of doors. About seventy-five adults and forty children were present and all enjoyed a good time. The county agents who were in session at that time were the guests of the association.

At a business meeting following the picnic supper, the following officers were elected for the ensuing year: W. H. Sanders, '90, president; Mrs. B. L. Remick, '97, vice-president; Mrs. E. P. Samuels, '98, secretary; W. E. Grimes,

'13, treasurer. This executive committee will have charge of the annual alumni reception to be given on the evening of commencement day, June 21.

MARRIAGES

CARY-RALPHS

Miss Ethel Esther Cary, '15, was united in marriage to Mr. Jesse Clifton Ralphs, Wednesday, June 6, at Price, Utah. They will be at home in Price after July 1.

MAELZER-SHANER

Miss Sophia Elizabeth Maelzer, '14, and Mr. Harry E. Shaner were married Monday, June 4, at May, Idaho.

me, and I realize more this fact now than ever before. It certainly keeps me in touch with the activities of the college.

"Since the declaration of war, I realize that there is a tremendous spirit of preparedness throughout the states in the way of conserving and growing food supplies. Hawaii is doing its bit toward making these islands self-supporting. In the larger islands of the territory, organizations have been perfected for carrying out this program.

"This island of Maui, in which I am now living, has for its goal '1,000 children's gardens on Maui.' Seeds and plants for these gardens are given away free. Prizes are offered for the

COMMENCEMENT CALENDAR

JUNE 17 TO 21, 1917

SUNDAY, JUNE 17

4:00 P. M. Baccalaureate Sermon
THE RT. REV. JAMES WISE, D. D.
Bishop of Kansas, Episcopal Church
AUDITORIUM

MONDAY, JUNE 18

5:00 P. M. Phi Kappa Phi Initiation
HOME ECONOMICS REST ROOM
6:00 P. M. Phi Kappa Phi Dinner
HARRISON'S CAFE

TUESDAY, JUNE 19

9:00 to 10:00 A. M. Student Assembly in charge of Senior Class of 1917
AUDITORIUM
3:30 to 4:30 P. M. Dedication of Class Memorial
8:15 P. M. Senior Class Play, "A Pair of Sixes"
AUDITORIUM

WEDNESDAY, JUNE 20

2:00 P. M. Alumni Business Meeting
OLD CHAPEL
8:15 P. M. Recital by Music Faculty
AUDITORIUM

THURSDAY, JUNE 21

10:00 A. M. Commencement Exercises, Address, "American Ideals"
WILLIAM O. THOMPSON, D. D., LL. D.
President, Ohio State University
AUDITORIUM
12:10 P. M. Dinner to Class of 1917 and Invited Guests by Alumni Association
NICHOLS GYMNASIUM
2:30 P. M. Dress Parade, College Cadets
CAMPUS
4:30 P. M. Alumni-K. S. A. C. Baseball Game
ATHLETIC FIELD
8:00 P. M. Reception to Visiting Alumni, the Faculty, and Friends of the College by the Manhattan Alumni Association
NICHOLS GYMNASIUM

Mr. and Mrs. Shaner will be at home after July 1 at Mackay, Idaho.

BELL-SMITH

Miss Esther Bell, '15, of Riley, and Mr. Walter Smith, '15, were married at the home of the bride on Saturday, June 2. They will make their home at Manhattan, where Mr. Smith is engaged in business.

BLANKLEY-MCCRAY

Miss Jennie Lee Blankley and Mr. J. Myron McCray, '09, were married at Marion on Thursday, May 24. They will be at home on their farm near Zeandale, where Mr. McCray is engaged in raising pure seed corn.

ECK-STUEWE

Miss Paula Eck and Mr. Victor Stuewe, '16, were married Thursday, June 7, in Alma.

They will make their home on a farm near Alma, where Mr. Stuewe is in the dairy business, Holstein cattle being his specialty.

FOOD DRIVE IN HAWAII

Edward Shim, '16, who is teaching in Lahainaluna school, Lahaina, Hawaii, says in a letter to President Henry Jackson Waters:

"I am glad to learn of the progress of the Kansas State Agricultural college through THE INDUSTRIALIST. This alumni paper is a great paper to

first few best gardens. The boy scouts, being at the age of school children, will do their part in planting gardens. You may be interested to know that I am now a scoutmaster. As such, I have planned to conduct home garden contests at home this summer.

"Occasionally I think and almost dream of the Kansas State Agricultural college and the many good people with whom I was associated and acquainted in Kansas. I cannot write to all of them at once.

"The people here are daily talking about the war, especially after the United States has declared its entrance. The local national guard may be mobilized at any time.

"I shall work with the local United States experiment station in some potato spraying experiments. I hope my experiments will be successful and convincing, as this is a large potato growing region.

"You may be interested to know that Prof. J. W. Groff of Canton Christian college passed through Honolulu recently. I read with interest of the splendid work that is being done by our Kansas State Agricultural college representative in Canton.

"The college year is drawing to a close, and I extend my best wishes for alma mater, Kansas State Agricultural college."

BUILD ICEBOX AT HOME

MAKING REFRIGERATOR IS PRACTICABLE ENTERPRISE

May Be Constructed of Dry Goods Boxes with Small Amount of Other Materials, Points Out Professor Floyd

A little ingenuity and skill in handling tools are all that is required in constructing a satisfactory homemade refrigerator, according to E. V. Floyd, assistant professor of physics in the Kansas State Agricultural college.

The refrigerator is made of two dry goods boxes, one placed inside the other. The outside box should be considerably larger than the inside one, pointed out Professor Floyd. It should be 36 inches wide, 48 inches high, and 20 inches deep. The inside box should be 14 inches wide, 32 inches high, and 14 inches deep.

SHAVINGS USED FOR PACKING

The smaller box is supported inside the large one. A space is left between the two which is filled with fine pine shavings pounded tightly into it. This disposes of the spaces at the top, the bottom, and two sides of the inside box. The entire chest should then be turned over, a board removed from the back, and the space there packed snugly with shavings. Place the chest on legs six inches high, made of four by four lumber.

The next step is finishing the interior of the inside box. If the pieces fit well, this may be given several coats of enamel. If not, line the interior of the box with tin, or galvanized iron and enamel heavily so that a hard, smooth surface may be obtained.

INSURE CIRCULATION OF AIR

A partition for the ice should be placed in one of the upper corners in order to insure a good circulation of air. The floor of this partition should slant toward the back for disposing of water, which may then be carried to a drip pan at the bottom of the refrigerator by means of a small tin pipe.

The efficiency of the refrigerator depends as much on the fitting of the doors as on insulating material in the walls. After packing, the space between the two boxes should be closed and the surface made smooth to receive the door which should be made with double walls, and packed as the walls of the box. Some sort of fastening to hold the door tightly against the box is essential.

HOW SHALL HIGH SCHOOLS MEET SMITH-HUGHES ACT?

Educators Will Discuss Problem at Meeting at College June 28—Doctor Snedden to Speak

Principals, superintendents, and others interested will meet in force at the Kansas State Agricultural college Thursday, June 28, to discuss the question of organizing Kansas high schools to meet the conditions of the Smith-Hughes act, which will make possible increased activity in vocational lines.

Dr. David Snedden, professor of educational sociology, Teachers' college, Columbia university, New York, will be one of the speakers. Professor Snedden, when commissioner of education for Massachusetts, started the movement for state supported independent vocational schools. He will speak on "Current Problems of Vocational Education."

Other speakers will include W. D. Ross, state superintendent of public instruction; A. A. Potter, dean, division of engineering; Dr. W. M. Jardine, dean, division of agriculture; Mrs. Mary Pierce Van Zile, dean, division of home economics; H. L. Kent, principal, school of agriculture; and George E. Bray, industrial engineer, division of extension.

Red Cross training is to be given in the summer school. Two nurses' training courses, consisting of 15 lessons each, will be taught by Miss Loula Kennedy and Mrs. J. C. Ewing, both graduates of nurses' training schools. Requests have been made for ambulance training classes and if enough persons are interested these will also be organized.

WHEN HAY NEEDS CARE

ALFALFA DEMANDS ATTENTION UNDER ADVERSE CONDITIONS

Moisture Content Must Be Reduced to 20 Per Cent if Product Is to Be Safe in Storage in Mow—Guard Against Worm

Particular care should be used in curing alfalfa under adverse weather conditions, says R. K. Bonnett, instructor in crops in the Kansas State Agricultural college.

If alfalfa has just been cut and is still green, it is best not to turn it when wet by rain. It should be left in the swath until favorable weather conditions prevail. Provided the hay has dried enough on top it should be turned, preferably with a side delivery rake, and allowed to dry in the windrow. Allow the surface to become dry before turning the alfalfa under, and keep turning until all the hay is dry. If hay has been bunched and is wet by rain, open up the bunches as soon as the top is dry and allow sun and wind to blow through it.

WHEN SHOCKING WILL PAY

Under the weather conditions of the last few weeks, shocking hay is good practice. Make small shocks that will turn water. Leave them until favorable weather conditions prevail before putting the hay into the mow or stack. Some of the most progressive farmers use shock covers, but for the average farmer, the original cost of these and the work required for their proper use, is prohibitive.

For hay to be safe for storage in mow, the moisture content must be reduced to at least 20 percent. This point can be determined by taking a small wisp of hay and twisting it. If moisture comes out and it breaks readily it can be safely stored.

ALFALFA IS COMMONLY STACKED

Probably more alfalfa hay is stacked in Kansas than is stored in sheds and it is important that the stack be constructed properly. In building a circular stack the sides should be given a fairly prominent bulge and the middle should be well tramped as more hay is lost through poorly packed centers than in any other way. The top should be fairly well rounded and when settled should show good form.

If some marsh hay or slough grass can be secured it is advisable to cover the stack with this in order to shed water and to prevent excessive losses during rainy weather and before the stack is well settled.

CLEAN THE HAY MOW

Clean the hay mow and burn the old stack bottoms as a safeguard against damage to the new alfalfa crop by the clover or alfalfa hay worm, is the suggestion given by George A. Dean, professor of entomology in the Kansas State Agricultural college.

"Clover hay worms destroy many tons of alfalfa each year," said Professor Dean. "The work of these pests is often mistaken for a mold."

"These insects have increased in numbers in Kansas due to the extensive growing of alfalfa. They are found in almost all parts of the United States where alfalfa, clover, or timothy is grown."

WORK MOST OF YEAR

"The worms or larvae usually are noticed near the bottom of the stack but in two year old hay they may be all through the stack. The larvae are active and of a whitish to brown color with the head more or less reddish. They spin silken webs in the hay. The worms work in the hay during the fall, winter, and early spring. In the late spring they pupate and spin a thin silken cocoon about themselves."

"The adults make their appearance from the cocoon any time from the middle of May to early July. They are little lilac brown moths with wings spreading four-fifths of an inch. The females deposit their eggs on the hay in the stack or mow and usually in the windrow in the field. From these eggs a second brood hatches in July and August and the life cycle is thus completed twice in each summer. The

larvae produced are the worms which pass the winter in the hay.

PREVENTIVE METHODS NECESSARY

"This insect is always more abundant where new hay is stacked on old bottoms or in mows where old hay is allowed to accumulate from year to year. The moths are often noticed resting on the walls within barns where alfalfa and clover have been stored."

"The methods of control are preventive ones. Never stack alfalfa or clover on old bottoms or tops of stacks. Old bottoms should be burned and mows should be thoroughly cleaned before new hay is stored. The only safe plan to follow is never to put new hay on top of old hay."

MAY HAVE AMPLE VARIETY AND YET BE ECONOMICAL

Committee of Defense Council Prepares War Time Menus for Kansas Housewives

You don't have to eat the same thing at every meal in order to be economical in this war year. There's plenty of variety available without extravagance.

Here are a week's menus prepared by the committee on utilization and economy, Kansas council of defense:

SUNDAY

Breakfast—Sliced oranges and bananas, Spanish omelet, coffee.

Dinner—Cream of spinach soup, baked ham sliced thin (en casserole), cornlet fritters, baked potatoes, lettuce salad with French dressing, lemon meringue pie, coffee.

Supper—Creamed dried beef, baking powder biscuit, cocoa with marshmallow.

MONDAY

Breakfast—Sliced oranges, cereal, milk, rolls, coffee.

Lunch—Hot beef sandwiches, sliced tomatoes, radishes, olives, tea.

Dinner—Tomato bouillon, stuffed shad baked with rice sauce, boiled potatoes, chopped parsley cress salad, toasted crackers, cheese, coffee.

TUESDAY

Breakfast—Stewed prunes, poached eggs on toast, rice muffins, marmalade, coffee.

Lunch—Lentil and rice loaf, stewed tomatoes, Boston brown bread, apple sauce, coffee.

Dinner—Meat pie with potato crust, tomato and lettuce salad, French dressing, strawberry shortcake, coffee.

WEDNESDAY

Breakfast—Baked bananas, thin cream, corned beef hash, toast, coffee.

Lunch—Rice croquettes, cheese sauce, lettuce and radish salad, brown bread sandwiches, tea.

Dinner—Smothered round steak, creamed potatoes, peas, cabbage salad, Grecian rice pudding, coffee.

THURSDAY

Breakfast—Orange, salt codfish balls, corn muffins, butter, coffee.

Lunch—Bean souffle, entre, wheat bread, strawberry snow, tea.

Dinner—Roast chicken, brown gravy, bread stuffing, creamed onions, lettuce and orange salad, toasted crackers, coffee.

FRIDAY

Breakfast—Stewed figs, minced chicken omelet, coffee.

Lunch—Cream of celery soup, croustons, whole wheat bread and butter, sandwiches, jam, tea.

Dinner—Planked shad with garnish of duchess tomatoes, sliced tomatoes and radishes, endive salad with French dressing, apple sauce pie, coffee.

SATURDAY

Breakfast—Oranges, oatmeal, top milk, whole wheat toast, date marmalade, coffee.

Lunch—Strawberries in hulls, split pea loaf, brown bread, butterine, cocoa, shipped cream.

Dinner—Braised beef, brown gravy, rice, spinach, orange salad with French dressing, cheese straws, coffee.

DON'T LET BEES SWARM

OLD PRACTICE NOT BASED ON FACT, SAYS DOCTOR MERRILL

Single Colony Will Produce More Honey Than One Separated into Several—How to Guard Against Undesirable Process

Swarm control is an important factor in beekeeping, asserts Dr. J. H. Merrill, assistant professor of entomology in the Kansas State Agricultural college.

"The standard of successful beekeeping was formerly set by the number of swarms that issued during the year," said Doctor Merrill. "Now, however, it is known that one colony will produce more honey than will a colony which by swarming has been separated into two, or possibly more. Thus, while swarming may be the natural way for increasing the number of bees, it is not desired by the beekeeper who is keeping bees to produce honey."

SOUND INDICATES SWARMING

"It is an indication of swarming when queen cells nearly ready to be sealed are found in the brood chamber. The night before a swarm is to issue a peculiar 'quawking' or 'piping' sound may be heard in the hive. This sound is made either by the old queen, which is about to swarm, or by the new queen, which as yet has not emerged. If it is a primary swarm, it will probably issue between 10 o'clock in the morning and 3 o'clock in the afternoon. If it is an after swarm, it may emerge at any time between 7 o'clock in the morning and 4 o'clock in the afternoon. The beekeeper who has successfully wintered his bees so that he has a strong colony in the spring to carry on the summer's work should do all in his power to prevent swarming. "The exact cause for swarming is not known, although there are several conditions which are known to stimulate it. If these conditions are remedied, a large proportion of swarming will be controlled."

BOTHERS COMB HONEY PRODUCERS

"Beekeepers engaged in producing extracted honey do not seem to be bothered so much by swarming as are those engaged in comb honey production. In the hives used for extracted honey the bees have much more room, and overcrowding is admitted to be one of the chief reasons for swarming. To overcome this condition, the bees should have a sufficient amount of empty comb and it should be in an easily accessible place near and above the brood."

"Exposure of the hive to the sun during the heat of the day should be avoided. The hives should be sheltered by trees, placed in an open shed, or protected by an improvised shelter of some sort. They not only must be protected from the sun but should have plenty of ventilation. This may be accomplished by using a deep bottom board and blocking up the corners of the hive during hot weather. The additional space furnishes more room for clustering and facilitates ventilation."

CUT OUT DRONE CELLS

"If a large number of drone cells are noticed, these should be cut out and replaced, if possible, with worker combs. Or, the frames from which the drone cells have been removed may be placed in the center of the hive. Here the bees are more apt to build worker cells. Full sheets of foundation encourage the building of worker cells."

"Probably the most commonly practiced method for preventing swarming is by cutting out the queen cells. This, however, is not always dependable. In spite of practicing all of these methods of control, the bees may have the swarming fever so firmly fixed that nothing will prevent their issuing in swarms."

ALEXANDER PLAN IS USED

"Swarming may be prevented by proper manipulations. Young queens, preferably from stock which has not swarmed, may be introduced into the hive. Combs of brood may be removed and replaced with empty combs or sheets of foundation. Bait sections

or extractor combs may be used in the first super, in comb honey production. This will induce the bees to begin work promptly in the super and avoid crowding in the brood chamber."

"What is known as the Alexander plan is most commonly used for securing increase. When the colonies are nearly ready to swarm naturally, lift the colony which is to be divided, from its old stand and replace it with a hive containing frames of comb or foundation. Remove the center comb from the new hive and exchange it for a frame of brood from the old hive. Place the queen on the frame of brood in the new hive. See that no queen cells are present. Place a queen excluder on top of the new hive which contains the queen and empty combs, and set the old hive on top of it."

"After five days examine the combs carefully, and if queen cells are started above the excluder, the old hive should be removed to a new location. If no queen cells are started the hive may be left until all the young larvae are capped. At the end of 24 hours after removing the hive to a new location, it should be provided either with a queen or a ripe cell. If a laying queen is given to the bees less time will be lost."

MELCHERS TO MAKE PLANT DISEASE SURVEY OF STATE

Botanist Will Be Assisted by Several Specialists from Federal Government Laboratories

A plant disease survey of Kansas will be made by L. E. Melchers, of the department of botany in the Kansas State Agricultural college.

Mr. Melchers expects to have the assistance of six or eight men, who will be appointed by the government. They will keep in touch with all plant diseases of the state and make reports to the government.

Mr. Melchers will pay special attention to a new bacterial disease of wheat, which was reported in the state for the first time by him in 1915. The government has appointed special help and money for the investigation of the disease. F. V. Rand, of the laboratory of plant pathology, is already stationed in Mr. Melchers' laboratory and will cooperate with him in this work.

It is expected that within a week another assistant will be added to the force. This person will be a graduate student of the college, whose work will be on the cultural phase of the bacterial disease.

LET THE WINDMILLS HELP IN WINNING OF THE WAR

Power Available in Kansas to Furnish Water for Many Acres of Garden

Let the windmills help win the war, urges the Kansas council of defense.

An ordinary windmill if worked to its capacity can pump water enough for a quarter of an acre to an acre of garden. Every tenth of an acre of garden can furnish food equivalent to 400 pounds of round steak. If every windmill of central and western Kansas should be used for only an average of one tenth of an acre of garden enough food would be supplied to provision an army division.

If the windmill is attached to a force pump a garden hose and sprinkler may be used to put water on the garden.

In most instances it is necessary to provide some storage for the water. Dirt reservoirs are practical where the seepage is not too great. Common stock water tanks placed in series with siphon connections make good storage for a small garden. A cement silo without doors makes an excellent reservoir.

If the windmill is to work to capacity, storage must be provided sufficient to allow the mill to run night and day. Storage is necessary also to provide a water head sufficient for spreading the water.

The best time to irrigate is in the evening. Soak the ground well. Give enough water to saturate the subsoil then as soon as the surface permits cultivate to conserve the moisture in the usual way.

MOTH EASY TO CONTROL

IT'S UNNECESSARY TO HAVE CLOTHING DAMAGED IN SUMMER

Protection by Simple Means Is Advocated by Entomologist—Moth Balls, Tobacco, and the Like Are Not Sure Guards Against Insects

Clothes moths, injurious to woollens and furs, may be controlled by use of simple methods, according to George A. Dean, professor of entomology in the Kansas State Agricultural college.

Repellents will not protect fabrics if they have become infested, pointed out Professor Dean. Even to depend upon such repellents as camphor, moth balls, or tobacco, will prove more or less unsatisfactory. Cast off woollens should not be stored in dark closets or in attics, where they will breed insects that feed on animal matter. The floors and corners in closets should be kept clean.

LITTLE DANGER TO CARPETS

Articles in daily use, such as carpets, rugs, and clothing, are not likely to become seriously infested. Woolen garments, furs, and plumes stored in dark closets, wardrobes, or bureau drawers suffer most. The greatest damage is done in the summer when woollens and furs are not in use and the moths are most active.

If such garments and materials that are not to be used are carefully brushed, beaten, sunned, and placed in tight pasteboard boxes, the joints of which are sealed with gummed paper, they will go through the summer in comparative safety. Such articles may also be protected by inclosing them in paper bags, and hanging them free of the floor—in a closet or in the attic. Clothing put away in a closet or wardrobe should be brushed and sunned before storage and carefully examined at least once a month throughout the summer.

TREAT TRUNKS WITH GASOLINE

Trunks and boxes in which clothing is to be stored for the summer should be cleaned and treated with gasoline. The clothing to be packed away in them should first be beaten, brushed, and sunned. In addition to this, garments should be fumigated with carbon bisulphide at least once a month from April to August.

Since there is no development of the insects at a temperature below 40 degrees, it has become a common practice to place furs and other expensive garments in cold storage where they are safe whether infested or not.

DUST RUGS EVERY MONTH

Carpets and rugs should be dusted at least once a month in the summer time. Curtains and portieres should be frequently spread out and brushed. They should never be folded back in one position for weeks. Upholstered furniture should be taken out into the strong sunlight occasionally and brushed in all the folds and corners. Where carpets are tacked down, they usually become infested along the edges, and when the infestation is discovered a liberal use of gasoline is recommended. Gasoline does not injure the cloth or leave residues. Cloth lined carriages stored for some time should be protected by spraying with a little benzine or gasoline. This can best be applied with a common garden atomizer.

The two species of cloth moths are the case making and the webbing moth. The adult moths are straw or buff colored and measure about half an inch from tip to tip of expanded wings. The wings are narrow and are fringed with hairs. The moths are nocturnal in habit and thus shun the light. They fly about the rooms at night, laying their eggs on furs, feathers, in the folds of woolen goods, in crevices of upholstered furniture, in the edges of the carpet, and in the lint and fiber in the cracks of the floor.

"Classification at Agricultural Fairs" is the title of a bulletin issued by the division of college extension in the Kansas State Agricultural college. Each year many inquiries are received regarding the best method of procedure in classifying at local agricultural fairs, and this bulletin was designed to meet this need.

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Kansas State Agricultural College, Manhattan, Thursday, June 21, 1917

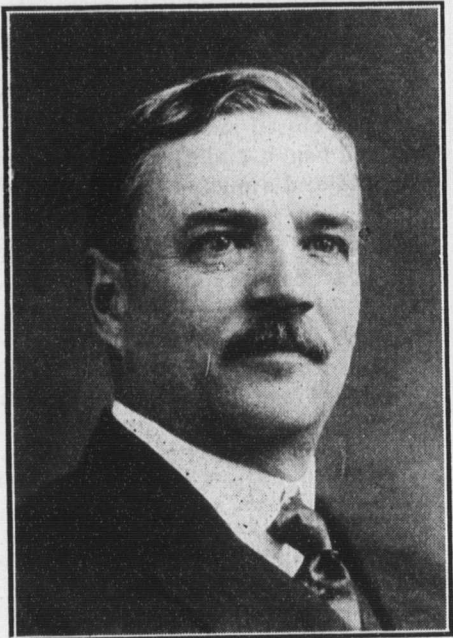
Number 36

GIVES DEGREES TO 180

COLLEGE HOLDS FIFTY-FOURTH ANNUAL COMMENCEMENT EXERCISES

Doctor Thompson Presents Effective Discussion of American Ideals—Seniors, Presented by Deans, Receive Diplomas from President Waters

More than 180 degrees were conferred this morning at the fifty-fourth June commencement of the Kansas State Agricultural college. The number of graduates who received diplomas today is more than 25 times the number



PRESIDENT HENRY JACKSON WATERS

on whom degrees were conferred at the first graduation half a century ago.

The address of the morning was given by William Oxley Thompson, D. D., LL. D., president of the Ohio State university. Taking for his subject "American Ideals," Doctor Thompson pointed out interestingly and effectively the fundamental principles on which the life and civilization of the nation have been built up.

The candidates for degrees were presented by the deans of their respective divisions—Dr. J. T. Willard, dean of general science; Dr. W. M. Jardine, dean of agriculture; Mrs. Mary Pierce Van Zile, dean of home economics; and A. A. Potter, dean of engineering. The degrees were conferred by Dr. Henry Jackson Waters, president of the college.

CERTIFICATES IN SHORT COURSES

Certificates were awarded to a large number of students for work in short courses.

The attractiveness of the program of the morning was enhanced by several selections played by the college orchestra and by two vocal solos, "Across the Hills," and "Alone," by Elton Calkins of the department of music. The Rev. Drury Hill Fisher, D. D., pastor of the Presbyterian church, Manhattan, acted as chaplain.

The degrees conferred are as follows:

ADVANCED DEGREES TO GRADUATES

Master of Science—Cliff Errett Aubel, Newcastle, Pa.; Anson Lane Ford, Manhattan; Frank Clyde Harris, Manhattan; Miner Monroe Justin, Manhattan; Lorenzo Beckley Mann, Hastings, Nebr.; Robert Ellsworth Mohler, McPherson; Clyde William Mullen, Lawton, Okla.; Herschel Scott, Manhattan

Civil Engineer—Walter Jacob King, Manhattan.

Mechanical Engineer—Rainey Faris, Upper Alton, Ill.; Edward Skillman, Tribune.

Electrical Engineer—Louis Blaine Bender, Fort Worden, Wash.; Benjamin Franklin Hillebrandt, Kansas City, Mo.

DEGREES IN AGRICULTURE

Bachelor of Science in Agriculture—Henry Joseph Adams, Topeka; Charles Rupe Adamson, Erie; Wood Bass, Eldorado; Luster Roy Brooks, Win-

field; Blaine Crow, Manhattan; Jay Howenstine Cushman, Emporia; Frank Elsworth Dowling, Manhattan; Paul John Englund, Falun; Ira Gordon Freeman, Ellsworth; Samuel Ray Gardner, Hartford; Wilbur Ross Gore, Manhattan; Clarence Owen Grandfield, Maize; Edward William Harvey, Parsons; Ferdinand Eugene Hayes, Louisville; Waldo Frederick Heppie, Wichita; Lyman Ray Hiatt, Esbon; Madison Lewelen Holroyd, Cedar Vale; Louis Edward Howard, Manhattan; Carl Fountain Huffman, Tonganoxie; Glenn William Keith, Belleville; Floyd Brode Kelly, Kansas City, Kan.; Ross Bartley Keys, Winchester; Harold William Luhnnow, Oak Park, Ill.; Roscoe Irwin MacMillan, Kansas City, Kan.; William Redmond Martin, Wathena; Lowell Marston Mason, Belle Plaine; Edgar Cruger Miller, Anthony; Dwight Ellsworth Hull, Manhattan; John Rogers Neale, Manhattan; Alfred Carl Nelson, Paola; George Raymond New, Emporia; Arthur Reid Newkirk, Geneseo; Robert Osborn, Wichita; William Francis Pickett, Manhattan; Frank Irving Reynolds, Mulvane; Lyle Verne Rhine, Manhattan; Harry Weber Schaper, Mulvane; Charles Louis Skelley, St. Paul; Joseph Burton Sweet, Manhattan; Earl Chapman Thurber, Arkansas City; Frank Sumner Turner, Tonganoxie; Reed Weimer, Chapman; Wilbur William Wright, Newton; Wilhelm Alexander Wunsch, Argonia; Ludwig Albert Zimmerman, Belle Plaine.

Doctor of Veterinary Medicine—John Burton Barnes, Bellaire; Aaron Andrew Brecheisen, Edgerton; Harve Frank, Jewell; Daniel Milton Purdy, Manhattan; Edward Adolf Schmoker, Interlaken, Switzerland; Warren Robert Sheff, Haven; Harry Edward Van Tuyl, Basehor; Josiah Wistar Worthington, Richfield.

DEGREES IN HOME ECONOMICS

Bachelor of Science in Home Economics—Helen Josephine Allis, Manhattan; Essie Jane Anderson, Manhattan; Edith Irene Andrew, Manhattan; Eunice Ann Baird, Cherryvale; Mary Maria Baird, Cherryvale; Rose Theodora Baker, Topeka; Mildred Gertrude Barnes, Rock Creek; Myrtle Ethel Bauerfind, Minneapolis; Lucy Van Baughman, Larned; Clara Merle Beeman, Topeka; Martha Estella Blain, Manhattan; Mabel Luella Botkin, Manhattan; Nelly Elizabeth Boyle, Spivey; Anna Brandner, Burns; May Brookshier, Chillicothe, Mo.; Hallie May Bryson, Manhattan; Lillian Anna Buchheim, Winkler; Elizabeth Melvern Burnham, Kansas City, Kan.; Blanche Clark, Eskridge; Rachel Clark, Eskridge; Alva Lee Cooper, Olathe; Ruth Christina Daum, Eureka; Florence Lissa Evans, Goshen, Ind.; Rosanna Farquhar, Manhattan; Christina Grace Figley, Kansas City, Kan.; Grace Gardner, Hartford; Dorothea Pearl Gish, Manhattan; Altha Teresa Goodwyn, Minneapolis; Stella Jane Gould, Wilroads; Gladys Mae Grove, Eureka; Blanche Mary Haggman, Kackley; Charlotte Barrett Hall, Chillicothe, Mo.; Mary Alma Hamaker, Scranton; Elizabeth Lillian Hargrave, Richmond; Zora Frances Harris, Manhattan; Dorothy Louise Heartburg, Manhattan; Frances Hildebrand, Coffeyville; Mabel Ellen Hinds, Manhattan; Pearl Vivien Hinshaw, Argonia; Elsie Ursula Hoffman, Enterprise; Esther Lydia Hostetter, Manhattan; Ellen Elizabeth Howell, Garnett; Mabel Marguerite Hunter, Manhattan; Celia Belletta Johnson, Dresden; Lelia May Kent, Franklin, Nebr.; Marion Bell Keys, Enid, Okla.; Flora Einsel Kirk, Manhattan; Amy Alice Lamberson, Lyons; Lottie Lasswell, Havensville; Lillian McCarty, Iola; Agnes May McCorkle, Holton; Vera Anna McCoy, Imperial, Nebr.; Beulah Lillis McCall, Gaylord; Kittie May, LaCygne; Charlotte Mayfield, San Marcos, Tex.; Laura Mueller,

(Concluded on Page Four)

HONORS AWARDED TO 51

PHI KAPPA PHI ELECTS GRADUATES AND OTHERS TO MEMBERSHIP

Scholarship Society Chooses 19 Men and Women from Class of 1917—Prof. Edward M. Shelton Is Recipient of Special Distinction

One former professor, 21 alumni, 10 members of the faculty, and 19 members of the graduating class—51 in all—were elected last week to membership in Phi Kappa Phi, honorary scholarship society.

The initiation services, conducted by Dr. Henry Jackson Waters, president of the local chapter, were held Monday afternoon and were followed by a dinner.

Phi Kappa Phi, which has chapters in about 25 of the leading educational institutions of the country, stands for the unity and democracy of learning. Elections to membership are made on the basis of scholarship in all branches of study.

WAS DIRECTOR OF STATION

Edward M. Shelton, M. S., of Seattle, Wash., was elected an honorary member—a distinction conferred on persons who have given conspicuous service to the cause of scholarship. Professor Shelton is a graduate of the Michigan Agricultural college, was professor of agriculture in the Kansas State Agricultural college from 1874 to 1890, and was the first director of the agricultural experiment station. For some time he was managing editor of THE INDUSTRIALIST. He was an officer of great ability and force. He left Kansas to become governmental instructor in agriculture for Queensland, Australia. Having returned to the United States some years later, he is operating a large fruit farm in Washington.

The alumni elected to membership represent classes from the first one graduated, that of 1867, to the class of 1909. These alumni were high in scholarship as students, and have made distinguished record in many fields since graduation.

LIST OF ALUMNI CHOSEN

The list of alumni elected, with the classes to which they belong, follows: 1867—Mrs. Emma (Haines) Bowen, A. M., Manhattan; a member of the first class graduated, and a leader in missionary, church, educational, and civic activities.

1882—Warren Knaus, B. S., M. S., McPherson; a journalist and distinguished coleopterist.

1883—James W. Berry, B. S., Jewell; farmer, contractor, manager of telephone company, former member of board of regents.

1887—Walter J. Burtis, B. S., Fredonia; farmer, member of legislature, president of the Alumni association.

1888—Lyman H. Dixon, B. S., 101 Park avenue, New York; architect, general superintendent for Charles Platt, architect.

1891—Herman Willard Avery, B. S., Wakefield; farmer, member of state senate, director of the Alumni association.

1897—Wilhelmina Henrietta Spohr, B. S., Teachers college, Columbia university, New York; elected professor of household arts education, Teachers college; to receive master's degree this year.

1900—Walter Fisk Lawry, B. S. in M. E., Hawkesbury, Ontario, Canada; designing engineer for mill buildings.

1900—Deane Bret Swingle, B. S., M. S., 713 Grand avenue, Bozeman, Mont.; professor of botany and bacteriology.

1901—Rainey C. Faris, B. S. in M. E., 2409 Crawford avenue, Alton, Ill.; mechanical and constructing engineer.

1901—Mrs. Helena Maude (Pincomb) Symms, B. S. in D. S., Troy; before her marriage held important positions in household science.

1903—Raymond George Lawry, B. S. in M. E., 7240 Merrill avenue, Chicago; mechanical engineer, in charge of mining department, Roberts and Schaefer company.

1903—Clara Pancake, B. S. in D. S., Thirteenth and Spring Garden streets, Philadelphia, Pa.; head of department of home economics, Philadelphia Normal school.

1904—Louis Blaine Bender, B. S. in E. E., Fort Worden, Port Townsend, Wash.; lieutenant, coast artillery corps, district artillery engineer and ordnance officer.

1904—P. McDonald Biddison, B. S. in E. E., 836 North Park street, Columbus, Ohio; mechanical engineer, Ohio Fuel and Supply company.

1904—Helen Monsch, B. S. in D. S., Ames, Iowa; associate professor of home economics, Iowa State college.

1905—William Carl Lane, B. S. in E. E., Stillwater, Okla.; professor of electrical engineering, Oklahoma Agricultural and Mechanical college.

1906—Lester Allen Ramsey, B. S. in M. E., 219 Seventeenth street, Brooklyn, N. Y.; general superintendent engineering department, Shipley Construction and Supply company.

1907—Atsushi Miyawaki, B. S. in Agr., M. S., Hokkaido, Japan; lecturer in dairying, Tohoku Imperial university, Sapporo, Japan.

1908 and 1909—Raymond W. Brink, B. S., and B. S. in E. E., Paris, France; mathematician, traveling fellow in mathematics, Harvard university, elected to important university position.

1908—Helen Hay Halm, B. S. in D. S., Nashville, Tenn.; assistant professor of education, Kansas State Agricultural college.

1909—William L. Enfield, B. S. in E. E., 3188 Sycamore road, Cleveland, Ohio; electrical engineer, national lamp works of General Electric company, Nela Park, Cleveland, Ohio.

FACULTY MEMBERS ELECTED

Faculty members were elected as follows:

Zora G. Clevenger, A. B., University of Indiana, professor of physical education and director of athletics; Leland David Bushnell, B. S., Michigan Agricultural college, M. S., Harvard university, professor of bacteriology; Alfred Everett White, B. S. and M. S., Purdue university, associate professor of mathematics; Leo Edward Melchers, B. S. and M. S., Ohio State university, instructor in plant pathology; Harry Umberger, B. S., Kansas State Agricultural college, supervisor of demonstrations, division of college extension; Siebelt Luke Simmering, B. S., University of Colorado, M. S., University of Illinois, assistant professor of steam and gas engineering; Lee Raymond Dice, A. B., Leland Stanford Junior university, M. S. and Ph. D., University of California, instructor in zoology; Maurice Cole Tanquary, A. B., A. M., and Ph. D., University of Illinois, assistant professor of entomology; James Burgess Fitch, B. S., Purdue university, associate professor of dairy husbandry; Frances Langdon Brown, A. B., Kansas State Normal school, B. S., Kansas State Agricultural college, director of home economics, division of college extension.

MISS HARRISS RANKS FIRST

The members of the graduating class elected to membership represent the highest scholarship of each of the four divisions of the college. The highest record was made by Miss Stella Maude Harriss of Fairbury, Nebr., division of general science, while Waldo Frederick Heppie of Burlington, Iowa, division of agriculture, stood second.

The list of members of the class of 1917 elected to Phi Kappa Phi follows:

Division of Agriculture—Waldo Frederick Heppie, Burlington, Iowa; Charles R. Adamson, Erie; Harold W. Luhnnow, Oak Park, Ill.; W. R. Mar-

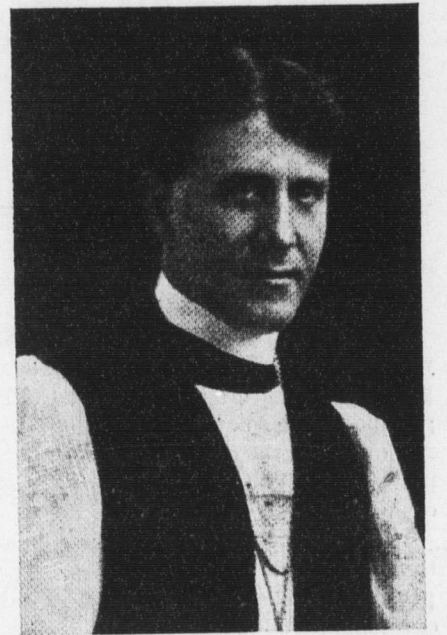
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IS SPELT IN CHARACTER

MAN'S POWER IN COMMUNITY DEPENDS ON FOUNDATION

Biggest Contributions to Be Made to America Are Not Financial Ones, Declares Bishop Wise—Nation to Learn Meaning of Patriotism

The thing that makes a man a real power in the community in which he lives is spelt in terms of character, in the opinion of the Right Reverend James Wise, D. D., Bishop of Kansas, Episcopal church, who delivered



THE RIGHT REV. JAMES WISE, D. D.

the baccalaureate sermon Sunday afternoon in the college auditorium. He chose as his subject, "The Foundations of Life."

"It is not how much money you can make out of life that is going to make your life valuable," said Bishop Wise. "The big contribution you can make to America is not a financial one but one that can be spelt only in terms of character."

"It is the kind of things you are doing, the kind of things you are thinking, the kind of things you are saying, that make you what you are."

MUST LOOK AT WORDS AFRESH

"One of the things I have learned since leaving college is that I know a good deal less now than I did then, and the older I grow the more tremendously I am impressed with the fact of how little I know."

"There come times in our individual lives and in our national life when we have got to take words out that we have been accustomed to use and look at them afresh. And perhaps because they have lost their value from overmuch usage we have got to take them back again into the mint of our own thought and stamp them with a new idea."

"There is one word that we have to take out of our vocabulary now and look at again and stamp carefully. That word is 'patriotism.'"

"I have listened to expressions of patriotism and enthusiastic shouting over the stars and stripes on the Fourth of July, but I venture to say that within this next year the American people and thousands of individuals in the American nation are going to look at the word 'patriotism' and learn its inner meaning as they have never learned it before."

WILL REACH NEW CONCEPTIONS

"France today is learning the meaning of patriotism in the pouring out of her life blood. England today is stamping afresh with power and meaning that tremendous word called patriotism. The United States is going to learn its lesson and when the United States learns that lesson it is going to sink deep down into human hearts and the sword is going to pierce the very soul of our American life."

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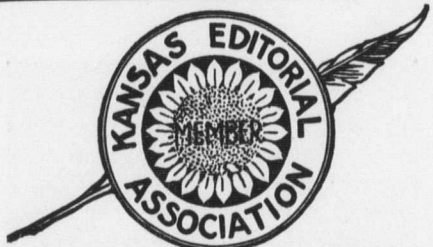
H. J. WATERS, PRESIDENT Editor-in-Chief
N. A. CRAWFORD Managing Editor
J. D. WALTERS Local Editor
ADA RICE, '95, M. S. '12 Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The price of THE KANSAS INDUSTRIALIST is 75 cents a year, payable in advance. The paper is sent free, however, to alumni, to officers of the state, and to members of the legislature.

Entered at the post-office, Manhattan, Kan., as second-class matter October 27, 1910. Act of July 16, 1894.



THURSDAY, JUNE 21, 1917

A TIME OF PROBLEMS

THE KANSAS INDUSTRIALIST this year, as for more than 40 past years, greets the returning alumni and bids godspeed to the newest alumni now going out from the college to make their place in the world of industry and civic life.

This is a portentous time, for education as for all other activities. The problems of the day offer a peculiar challenge to educated men and women. The alumni of this vocational institution will have a large part to perform in solving these problems, and they will perform it well. No task is too difficult for a graduate of the Kansas State Agricultural college, and no problem makes him give up.

TRAIN THE BOYS

With the number of men engaged in actual warfare, labor is bound to be scarce during the period of the war. It will be impossible to obtain in all industries a sufficient supply of labor thoroughly skilled in those lines.

Labor may be trained, however. It is for this reason that the high school boys may help. Nobody wants education disrupted—nobody wants boys of school age to stay out of school. There is, however, a long summer vacation in which most boys do little. If they were properly trained in the operation of farm machinery they could be of great service on the farms—and the farms will play the most important one of the most important parts in the winning of the war. Besides, it would be a big benefit to the boys. Train the boys.

A WORD FOR THE CANDLE

The candle still has a place. The home that cannot have electric or gas lights probably can afford a pretty candelabra for the dining table. This, when filled with well trimmed candles, makes a table centerpiece that will give distinction as well as plenty of light for the meal. Candles are also nice for bedrooms, and many housekeepers like them to use in the kitchen to supplement a bracket lamp.—Southern Agriculturist.

CO-OPERATE

Many who become members of co-operative organizations look at the organization much as some people look at our government, that is, as something apart from themselves. This class of people feel that the state or federal governments are external organizations which should give of their great wealth to the less fortunate of the people. As one has said: "He fools himself (but no one else) who expects to work in a co-operative society and not give as well as receive." Ignoring the law of co-operation is wherein many organizations and their members have failed.—California Cultivator.

THEY LIKE HALL

The presence of Otis E. Hall, director of the junior extension service of the State Agricultural college, in Toronto Friday, recalls to mind that for a man who has been in the state hardly three years, he has acquired considerable of a reputation. In fact, among the boys and girls of the farming communities he is probably the best known man in the state, excepting Governor Capper. His work takes him into every county and puts him in direct contact with the young people interested in corn and canning clubs. Mr. Hall was county superintendent of Montgomery county, Indiana, a number of years and organized canning clubs in his county. His work attracted the attention of the government and he was called to his present position. Kansas has gained a strong man and a strong educator in Mr. Hall.—Toronto Republican.

HORSES FOR THE ARMY

The government has adopted a new method of buying army horses. It is fixing a flat price for horses of a certain class, instead of endeavoring to fix an individual price for each horse.

In the western district, which has Kansas City for its headquarters, the government is buying 2,100 cavalry horses, for which it will pay \$180 per head; 150 light artillery horses, at \$195 per head; 924 siege artillery horses, at \$235 per head. Only geldings will be accepted, and they must be between the ages of 6 and 10 years. They are buying 364 wheel mules, at \$235 per head; 364 lead mules, at \$190; 144 pack and riding mules, at \$165 per head. They must be between the ages of 5 and 10 years.

Bids will be accepted only from those who will agree to furnish as many as 300 horses or mules, all of which must conform to the government requirements. There will be no cut in the price, and no increase, unless it is found impossible to secure the number required at the prices named.

If the war continues for any considerable length of time, the demand for horses and mules will steadily increase. This means that it will pay to take good care of the supply on hand, and that it will pay to feed well this year's colts.—Wallaces' Farmer.

VACATION

The boys and girls on the farm have worked mighty hard and mighty faithfully this past spring. Thousands of them left school earlier than usual that they might help in this emergency. They are entitled at least to that compensation which a short vacation brings.

Practically every man in town figures on his vacation. The farmers, farm boys and farm girls who feed the town fellows are certainly entitled to one.

The writer well remembers the day or two each summer when he went fishing with his father. It was the greatest pleasure of the entire year, and it did not cost anything. We went at our work when we got back with enough more vim and energy that we made up for the time lost within a week after our return.

So will your boys and girls. Give them a vacation if you only borrow a tent and go off to some stream or lake, and if there are no lakes or streams in reasonable reach, go to some grove with some friends and camp out for a couple of days. The Fourth of July is a good time to work into the vacation.

But give the boys and girls on the farm a little play spell, even if it is short.

And you fathers and mothers on the farm, take a play spell. It will help you live longer and make life better worth living.—A. E. Chamberlain in the Dakota Farmer.

RECENT BOOKS

Potter, A. A. Farm Motors. Second Edition. Demy octavo, pp. xi + 299, figs. 296. New York: McGraw-Hill Book Company.

The first edition of Dean Potter's work, published in 1913, proved exceedingly valuable and popular. The second edition, which includes much additional material, is certain to prove even more successful.

In this book, which is in the Agricultural Engineering Series recently inaugurated by the publishers, steam and gas engines, hydraulic and electric motors, traction engines, automobiles, animal motors, and windmills are discussed clearly and interestingly. The author uses in every discussion the latest data obtainable. The value of the book is greatly increased by the large number of drawings and other illustrations, all of which contribute directly to a clear understanding of the matters treated in the book. The work will be of great value to any one who has anything to do with farm motors—or, for that matter, with automobiles or gas en-

A QUARTER CENTURY AGO

Items from The Industrialist of June 18, 1892

"He who knows little, and knows it, knows much."—Class motto.

The industrial departments made their usual displays of student work last week.

W. J. McLaughlin, '87, is proprietor and publisher of the Press, in Bera, Nemaha county.

A true night-blooming cereus in the greenhouse is in bud, and is expected to open in a day or two.

The greenhouse fuschias were in their brightest garb on Wednesday, and attracted hosts of visitors.

The good things said about the college by the visitors during commencement week would fill the paper.

Jacob Lund, '83, is engineer of the Capital Iron works at Topeka, with address at 306 Jefferson street.

Education and the War

ACROSS the white page of every commencement program, as across the white page of every history of the present day, is written, in letters that the discerning eye cannot fail to see, the word, "War." The word is a symbol of a testing day for education and for the nation, yes, even for the world.

For college men and women, this day is primarily a testing day for education. It was not long since that colleges and universities closed in periods of war. It is a significant fact that in the present war colleges and universities are open even in the most beleaguered countries. The nations are depending on education as they never depended on it before. Education must not fail, particularly in this nation that has gone to war to vindicate the principles and ideals of democracy. Education for industry and democracy must play its part now, while it prepares to play an even greater part in the new world that is to come. Education will be tried in the fire, as silver is tried, but the fire will only reveal its singular beauties and its untarnished glories.

gines, whether used on the farm or elsewhere.

Kirkpatrick, M. G. The Rural School from Within. 12mo, pp. 303. Philadelphia: J. B. Lippincott Company.

Professor Kirkpatrick has had experience in all types of schools, from the one room rural school to the large college. He consequently brings to his study of the rural school a breadth of view and sympathy seldom found in writers on that subject. He tells, in an autobiographical way, of his own experiences in a rural school, and he draws from them, in an attractive and often quietly humorous way, important bits of educational philosophy. Unlike many works on education, the book is thoroughly readable throughout—few readers who start it will care to lay it down unfinished.

There should be a heavy demand for this volume as a text for teachers' reading circles. The author's sane, kindly viewpoint will help any teacher, whether in the rural schools or somewhere else. It will appeal, moreover, to anybody whose spirit has not left schooldays too far behind.

Ramsower, Harry Clifford. Equipment for the Farm and the Farmstead. 8vo, pp. xii + 523, figs. 543. Boston: Ginn & Company. \$2.25.

Mr. Ramsower, who is professor of agricultural engineering in the Ohio State university, presents in his work a general survey of farm engineering, discussing, among other matters, laying out the farm, the farmhouse, farm buildings, the plow and other implements, and rope and its uses. The book is intended for the practical farmer and for the student who plans to be a practical farmer. In approaching each subject, the author emphasizes the practical application of the principles involved. Many diagrams and illustrations add to the interest and value of the work.

D. G. Fairchild, '88, left on Thursday for the east to resume his labors in the division of vegetable pathology, department of agriculture, at Geneva, N. Y.

About a dozen members of the class of 1892 are still at the college—some finishing jobs of work on their own account, and others employed by the institution.

Florine Secrest, '89, sends the announcement of Commencement at the California State Normal school, San José, with her name in the list of graduates.

D. G. Robertson, '86, delivered the memorial address on Decoration day at Alton, Kan. He enjoys the privilege of living in a home of his own at Osborne.

H. V. Rudy, '91, Fresno, Cal., regrets that he could not share in Commencement festivities. He is interested in the problem of marketing California fruits without so many intermediate agencies.

Peaches will be a luxury in the college grounds as well as elsewhere this season, the cold, wet season at time of blooming preventing fertilization. It is estimated that the crop of both peaches and apples will fall at least 75 per cent short of last year.

Gertrude Coburn, '91, writes that she is to return to Menomonie, Wis., next year with increased salary. Manual training is being pushed in the Menomonie schools, she says, and the outlook is encouraging. Miss Coburn will be at home in Kansas City, Kan., after June 15.

The catalogue for 1891-1892 is ready for distribution, and will be sent free to applicants. A study of this catalogue reveals some interesting facts. There were in attendance last year 584 students, of which number 552 were from 77 counties of Kansas, and 32 from 14 other states. Twenty-nine applicants failed to pass the entrance examination, and were not enrolled.

ON THE ROAD

E. L. Darton

The windows of youth look out on a long, long road.

Travellers, laden and late, look up, in passing by,
Hearing laughter and song, and straightway forget their load.

Thronging the windows of youth, a beautiful company
Are leaning, and laughing, out of a frame of flowers;

Thoughtless, innocent-eyed, careless spirits and free.

Wisdom, gravely treading after the flying hours,
Glances up from the road that leads to the far-off goal:

Sees again the city of dreams, the soaring towers—

The shining towers and temples that lured his soul

Down from the windows of youth, to take the road unknown;
Sees the flashing of swords, and hears the thunder and roll

Of marching music, the call of dauntless bugles, blown
By lips of comrades dead, by red lips closed and cold.

Sees and hears, and forgets that he is old and alone.

* * * * *
Hears, and sees, and forgets that he is alone and old.

SUNFLOWERS

It's better not to think about the war all the time.

We favor boosting the rates on mail matter that hasn't any class at all.

The Austrians are getting over the notion that Italy lies beyond the Alps.

A HORRIBLE EXAMPLE

Little Willie drank ice tea
Each meal for forty days—
We buried him just yesterday,
Let no one sing his praise.

Notice to graduates: No matter what they tell you, you have only two things that amount to much—your college record and a bunch of habits. What happens in the next three or four years will tell whether they (and you) are worth much.

WHO WAS ST. CANDLEMAS?

There aren't enough saints in the calendar to suit the Kansas City Times, and so it canonized a new one last week, when in its answers to correspondents it remarked, "The church began observing the second day of February as the natal day of St. Candlemas."

THE TALE OF A TORNADO

Handsome mister,
Someone's sister
Sitting in a chair;
As he kissed her
Vicious twister
Tossed them in the air.
Lonely sister
Missed her mister
When the twister quit,
For the mister
Who had kissed her
Never even lit.

A FARM LETTERHEAD

"Where grow a few hogs and a little corn." These words have an honest, conservative, and wholesome ring. They appear under the owner's name on a farm letterhead which came to us the other day. On one side, and less pronounced, is a brief list of the live stock and farm products which the owner raises. It makes the letterhead impressive and much more individual than usual. Originality counts in letterheads as well as in other heads, and the reader of such a letter gets a wholesome impression of the owner, his farm and his business, from just these few simple words. How much better than glowing statements in the letterhead; the kind that are usually taken with a grain of salt. Even a busy editor catches the nicety of such an approach, and prospective buyers and business men must feel that here is a man it will pay to respect.—Orange Judd Farmer.

AMONG THE ALUMNI

Max Alderman, '13, has been appointed county engineer of Franklin county.

W. L. Wilhoit, '16, who is farming at Drexall, Mo., was a college visitor Thursday.

John May, '10, and Mrs. Mable (McDonald) May, are visiting friends in Manhattan.

L. P. Price, '11, is county engineer of Nemaha county. His headquarters are at Seneca.

Leo W. Rexroad, '13, has been appointed assistant bridge engineer of the Kansas City Southern railroad.

A. G. Vinson, '15, of the Oklahoma Normal School at Alva, is visiting friends in Manhattan and at the college.

Miner Justin, '07, will leave shortly with his family for Ogden, Utah, to continue his work as field agent for the bureau of crop estimates.

Stephen L. Potter, '14, who spent the last three years in government work in the Philippines, is attending the exercises of commencement week.

The Rev. R. A. Esdon, '03, has been called to the pastorate of the United Presbyterian church of Garnett and will take up his work there on July 1.

Fred Fockele, '02, has been made president of a Wichita bank at a salary of \$6,000. Since his graduation, Mr. Fockele has been connected with a bank at Waverly.

Miss Edith Updegraff, '16, is in Manhattan for commencement. She has completed a very successful year of teaching in Conway Springs, and will teach next year in Sedgwick.

Miss Evelyn M. Potter, '15, has finished her school work at Grainfield and returned to her home at Barnes. She will teach domestic science and art and English at Agenda next year.

Merle Collins, '13, city school garden director of Manhattan, in conjunction with L. C. Williams of the extension division of the college, is assisting in cooperative community canning.

L. R. Alt, '16, attended the food conference at the college last week. He plans to stay for summer school. Mr. Alt just closed his year's teaching of agriculture and manual training at Little River.

George A. Dean, '95, professor of entomology in the college, was recently elected to membership in Sigma Xi at the University of Nebraska. This is the leading honorary research society of the country.

Miss Olive R. Gage, '14, of LaCygne writes: "I have enjoyed the weekly visits of THE INDUSTRIALIST this year. My school has been out three weeks. I am planning to return to Manning next year."

John Vohringer, '13, and Mrs. Irene (McCreary) Vohringer, '12, are here for the summer. Mr. Vohringer taught in the high school at Miami, Okla., last year. He is now working for the department of horticulture of the college.

Dr. F. S. Schoenleber, formerly professor of veterinary science in the college, is seeking the services of several veterinary graduates to take up work on a ranch in South America. Written applications may be sent to Doctor Schoenleber at Manhattan. He will then arrange for interviews.

ALUMNI PRAISE BAND

Dr. Henry Jackson Waters, president of the college, has received the following telegram from Charles Marlatt, '84, and David Fairchild, '88, both of whom are in the United States department of agriculture:

"Hurrah for the college band! Highest appreciation for their patriotism in volunteering their services in France."

Newton T. Hill, '09, took the degree of master of arts last week at Butler college. Today he will be married to Mrs. Alma Alexander of Fountain City, Ind. On August 30 they will sail for India, where they will do missionary work.

Mrs. Mary (Painter) Rogers, '96, of Goodwell, Okla., writes that she hopes to send her daughter to college here next year, and that she and her husband, S. N. Rogers, may move to Manhattan in the near future, as they have seven children to educate.

R. T. Challenger, '08, and Mrs. Julia (Bayles) Challenger, '07, write of interesting work in the Montana State college at Bozeman, where Mr. Challenger is instructor. He is teaching in the summer school, at the close of which he and Mrs. Challenger hope to visit the Kansas State Agricultural college.

The Alumni association has just received a letter from Mrs. Maude (Knickerbocker) Pyles, '93, of Germiston, Transvaal, South Africa. It had been on the way since April 23. It contained her check for a paid up membership in the association. Mrs. Pyles' husband is connected with the Rose Deep mines.

Philip Fox, '97, received a major's commission in May and is now at Fort Sheridan, Ill., taking training. He is on leave of absence from his work as director of the observatory of Northwestern university. He was a member of the Twentieth Kansas infantry, which saw active service in the Philippine Islands in the Spanish-American war.

BIRTHS

Born, to Mr. O. A. Stevens, '07, and Mrs. Anna (Monroe) Stevens, '04, North Fargo, N. D., on June 7, a daughter, Muriel.

MARRIAGES

ALLEMAN-PARSON

Miss Eva Alleman, '14, and Mr. John D. Parson were married on Saturday, June 2, at the home of the bride in Kansas City, Kan.

MORRIS-ADAIR

Miss Ethel Morris and Mr. Walter B. Adair, '16, were married Friday, May 25, at Denver, Colo.

They will be at home after July 1 at Kimball, Nebr., where Mr. Adair is teaching.

TO PICNIC IN PORTLAND

The Kansas State Agricultural college alumni and former students residing in Portland, Ore., invite all Kansas State Agricultural college alumni, former students, and teachers to attend the annual picnic to be held some time in the week of July 7 to 14, when the National Education association meets in Portland. Those planning to be in Portland at that time should communicate now or upon their arrival with either Mrs. Maud (Kennett) Darnall, '95, chairman of the picnic committee, 5309 Ninety-second street, Southeast, Portland, Ore. (Telephone Tabor 2813); or Mrs. Miriam (Swingle) Joss, '96, president of the Portland Kansas State Agricultural College association, 4511 Forty-first Avenue, Southeast, Portland, Ore. (Telephone Sellwood 496).

HONORS AWARDED TO 51

(Concluded from Page One)

tin, Wathena; Josiah W. Worthington, Manhattan; Louis A. Zimmerman, Belle Plaine.

Division of Home Economics—Myrtle Bauerfind, Minneapolis; Jessie Fern Preston, Wichita; Anna Brandner, Burns; Alice Mae Sweet, Burlington; Mary M. Baird, Cherryvale; Vera Ann McCoy, Imperial, Nebr.; Martha Estella Blain, Manhattan; Mabel L. Root, Centralia; Edith Irene Andrew, Madison.

Division of Mechanic Arts—J. H. Flora, Manhattan; Gabe A. Sellers, Great Bend; Oliver Keith Rumbel, Moran.

Division of General Science—Stella Maude Harriss, Fairbury, Nebr.

CAN'T BE FED AS HERD

COWS MUST ALWAYS BE TREATED AS INDIVIDUALS

Too Light a Ration Is More Common Than Too Heavy a One—Improper Feeding Is Cause of Low Production of Average Animal

Cows must be fed as individuals and not as a herd if they are to be fed economically, asserts O. E. Reed, professor of dairy husbandry in the Kansas State Agricultural college. The quantity of milk produced by the cow is an indication of the quantity of feed she must have.

The first use to which the animal puts its food, whether producing milk or not, is to maintain the functions of the body. The feed in excess of this amount is used for producing milk, storing fat, or for growth of the foetus.

MAY NOT NOTICE UNDERFEEDING

That underfeeding is perhaps more common than overfeeding, is the belief of Professor Reed. The effect of underfeeding may not be noticed at once, as the cow will produce milk for a time by converting the surplus flesh of her body into milk. Hence, if a cow declines in weight while she is producing milk, it is an indication that she is not receiving enough feed. On the other hand, the over-fed cow may put fat on her body or she may get off feed.

A succulent ration should be maintained during the winter. Such a feed serves to keep the digestive organs in good condition. This succulence may be secured by feeding silage or roots. Silage makes the best succulent feed in this state because it is possible to obtain large yields of corn, cane, or kafir, which makes excellent silage.

BULK AND NUTRIENTS NEEDED

The feeds in a ration must be such as to provide a sufficient bulk to satisfy the appetite and feeding capacity of the animal, and to furnish the amount of nutrients needed by the cow. An animal may be fed enough nutrients in the form of grain to perform her work but she may receive too little bulk to be satisfied.

The roughage should form the foundation of the dairy ration. A cow should have all the roughage she can clean up, and the grain ration should be regulated by the amount of milk produced. A cow should be fed one pound of grain to each three pounds of rich milk produced and one pound of grain to four pounds less rich milk.

RATION MUST BE BALANCED

The three substances which must be considered in making up the ration of the dairy cow are protein, carbohydrates, and fats. These substances are found in all feeds but in varying proportions. The protein, or nitrogenous substance, is the most expensive. It is used by the animal in the production of hair, hoof, hide, horn, blood, and muscle. Alfalfa, clover hay, cottonseed and linseed meal, bran, oats, and gluten feeds contain a high per cent of protein. The carbohydrates and fats produce heat and furnish energy to make the fat that is stored up in the body and in the milk. Corn, kafir, cane, corn silage, timothy hay, oats, and wheat straw contain a high per cent of carbohydrates.

A balanced ration must contain both protein and carbohydrate foods. Alfalfa and clover furnish protein in form of roughage. In order to balance the ration, it is best to feed a grain rich in carbohydrates. If the roughage consists of cane or kafir, then a grain ration such as bran or oats must furnish the protein. The protein feeds are the most expensive feeds on the market. If alfalfa, cowpeas, and clover can be grown in the locality, it is cheaper to use them in the dairy ration.

MUST FOLLOW NATURE'S TEACHING

Cows must be fed intelligently if the highest and most economical returns are obtained. One of the principal reasons for the low average production of the Kansas cow is that she is not properly fed.

Economic feeding resolves itself into the study and execution of the lesson which nature teaches. The cow makes her greatest production in the early summer. The intelligent feeder therefore will strive to maintain similar conditions as nearly as possible throughout the year.

SENIORS MAKE HIT WITH UP TO DATE FARCE COMEDY

"A Pair of Sixes" Is Presented Effectively by Members of Class of 1917

In Edward Peple's "A Pair of Sixes" presented Tuesday evening, the class of 1917, through its committee composed of William N. Caton, Miss Nina May Powell, and Charles R. Adamson, brought to the auditorium stage one of the brightest and fastest force comedies ever produced there by an amateur cast.

The play is thoroughly modern—having to do with New York commercial and social life of the latest rapid fire type—and is full of startling and unusual dramatic situations most cleverly and originally worked out. The choice of this play was in line with the evident policy of those in charge of dramatic affairs to refuse to blink at high royalties and to bring to the college modern pieces of a high standard.

The play was well presented. The cast, under the direction of Charles R. Adamson, student assistant in the department of public speaking, gave evidence of thorough training and, for the most part, took full advantage of the many strong situations in the play. The action was unusually fast and in places very intricate, but at no time did the players display hesitancy or confusion in their parts.

The leading roles were taken by Miss Agnes McCorkle and O. K. Rumbel. Mr. Rumbel as the junior partner in a New York firm, and later as the household servant of the senior partner, displayed rare versatility in the interpretation of his part. Miss McCorkle, as Florence Cole, his fiancée, gave a lively and charming impersonation of that character. Second leads were carried by Ira Freeman, as George Nattleton, the senior partner in the firm, and Miss Nina May Powell, his attractively convincing wife. Miss Powell achieved a tremendously effective dramatic climax when in the third act, she broke into a crying fit and, sobbing convulsively, had to be carried from the room by her wild-eyed husband. As the wild-eyed husband Mr. Freeman was, from a histrionic standpoint, entirely a success.

The star comedy part of the evening was carried by Miss Laura Ramsey in the role of Coddles, the English housemaid. It was not an ordinary housemaid, dusting the furniture and making a few occasional remarks to help along the plot, that Edward Peple had in mind when he introduced the part of Coddles. And it was not an ordinary interpretation that Miss Ramsey gave to the role. She had cultivated the "H-English h-accent" of the laundry room variety to a finished degree, and her every move carried conviction of the most absolute sort. Real histrionic ability was shown in the presentation of this part.

As Vanderholt, the lawyer, the fine big voice of Henry Hoffman, showed to good advantage, as did also his half-pompous, half-crafty movement and demeanor. Robert Osborn made an enthusiastic and captivating traveling salesman, and Carl Huffman gave a rare exhibition of office boy officiousness and swagger as Jimmy, the boy. F. S. Turner made a good "I'm a poor married man" type of office clerk, while William Klooz as the German business man, gave an exhibition of the brogue that was the real thing. As Sally, the gum chewing stenographer, Miss Emily Lofinck, in clever makeup—including earrings, side ringlets of hair, and vanity box—was all that could be desired.

The play was managed by W. E. Paterson. As chairman of the play committee Mr. Caton took the place of Keith Kinyon, who has secured a commission with the United States Marines.

IN YEAR, 1,000 TESTS

FOOD LABORATORY OF COLLEGE DOES IMPORTANT WORK

Dairy Products Form Big Proportion of Material Sent in for Analysis—Some Entire Herds Furnish Milk Below Standard

More than 1,000 analyses were made by the food laboratory of the Kansas State Agricultural college in the year ending June 1, according to the annual report of Prof. Chester A. A. Utt. The total number of samples analyzed was 1,127, of which 932 were dairy products. Ninety-two samples of canned goods were analyzed and 33 samples of vinegar.

In connection with the analysis of a few samples of sub-standard milk, herd tests were made. The results showed this to be a necessary procedure with certain herds. It is a well established fact that the standard of 3.25 per cent of fat and 8.50 per cent of solids not fat is sufficiently low to include nearly all samples of whole milk. Samples from individual cows may run below this, but a large number will run much above it, so that most average milk will show about 3.8 per cent of butter fat and 9 per cent of solids not fat. If an entire herd consists largely of low test cows the resulting product from the herd will naturally fall below the set standard.

DISPOSE OF LOW TEST COWS

The herd tests this year showed that such a possibility may actually occur. Such milk may be sold for butter or condensing purposes, but is not standard milk. Such a condition may be corrected by getting rid of the low test cows.

In connection with certain supposed cases of ptomaine poisoning said to have been caused from the eating of canned salmon, a large number of cans of this product were examined for bacteria and tin. This work was done in cooperation with L. D. Bushnell, professor of bacteriology. The cans were subjected to a rigid bacteriological examination. The examination showed the salmon to be free from bacteria. Tin determinations on a large number of the samples showed a tin content of less than 50 milligrams to the kilogram. White rats ate the salmon without any harmful effects.

SUMMARY OF YEAR'S WORK

As in previous years, the laboratory did considerable miscellaneous work for the college and for the state dairy commissioner.

The summary of analyses follows: Milk, 622; ice cream, 142; cream, 142; evaporated milk, 20; butter, 6; salmon, 51; pork and beans, 27; chili con carne, 14; graham flour, 1; pancake flour, 5; bread, 3; macaroni and spaghetti, 4; oysters, 16; lard, 6; vinegar, 33; miscellaneous, 35.

DOCTOR SIEVER TO TRAIN MEDICAL RESERVE OFFICERS

College Physician Will Go to Fort Riley—Was on Border Last Summer

Dr. C. M. Siever, physician in the Kansas State Agricultural college, has received notice to report to the medical department at Fort Riley, where he will train medical reserve officers.

Doctor Siever was on the border last summer with the national guard doing medical and surgical work, and is well fitted for his duties at Fort Riley.

HEAD OF JOURNALISM WORK ON STAFF OF THE MIDLAND

Is Chosen Associate Editor of Middle Western Literary Publication

Nelson Antrim Crawford, professor of industrial journalism in the agricultural college, has been appointed associate editor of the Midland, a magazine established three years ago for the purpose of presenting the literary ideals of the middle west.

Among contributors to the magazine have been Arthur Davison Ficke, Keene Abbott, and other well known writers, and the fiction published was commended some time ago by the Boston Transcript as representing the best literary standards of America.

WAR TO CURE CANKERS

WILL MAKE AMERICA WORTHIER LEADER OF DEMOCRACY

United States Will Develop Fundamental Character, Believes Henry J. Allen—Russian Situation Is Better Than Had Been Hoped

This war is going to cure a lot of the cankers that have come to America in her years of successful enterprise, according to Henry J. Allen, editor of the Wichita Beacon, in speaking Friday evening at the commencement exercises of the school of agriculture.

"I believe that if we went on for 25 years more in the way we have gone for the last sixty years, we would confront in this country industrial and



HENRY J. ALLEN

social problems, the answer to which we would not know how to find.

"We are coming out of this great war with a fundamental character and with a new hardness of training to make us worthy, as I believe God always intended some day we should be worthy, to lead the nations of the earth in the ideals of democracy. We will come out of this war with a squarer, straighter, decanter relationship between the rich and the poor.

FIRST HOLIDAY FOR RUSSIA

"The situation in Russia is much better than we dared to hope it would be a month ago. Every day it seems to grow a little better. The Russian people are not working very much—they are not martialing themselves—but they are having a good time. This is the first real holiday the Russians have ever had.

"There is little drunkenness in Russia and no killings to amount to anything. They have made the government a sort of a debating society. They are having a great time but they are not shedding blood."

The need for sacrifice on the part of all American citizens was emphasized by Mr. Allen.

NO TIME FOR PROFIT MAKING

"This is not going to be a year for profit making on the part of business men," he said. "This is not going to be a year for money making on the part of those lads who go forth next September to lay their lives on the altar of service. They are not going to save any money at it. We who stay at home and enlist nothing but our dollars ought not to save any money at it as long as our dollars are needed by the government.

"A fund is to be raised for the Red Cross and when you are asked for a contribution remember that this fund is as necessary as any fund the government will expend. The work it does merely relieves the government of doing the work. It has been thought by the government that this work of mercy of protecting our sons on the battlefield can better be done by popular subscription than by government funds. It is just as necessary that we send these Red Cross units with the army as it is that we send any other provisions for their care."

SERIOUSNESS IS NOT REALIZED

That the American people generally do not fully realize the seriousness of the war situation was the opinion expressed by Mr. Allen.

"A month ago Mr. Balfour of England, said that from the best figures it looks as though Germany would not reach a crisis in her food situation or in her man situation for two years at least, and that experts in his country believe that the war will last three years," said Mr. Allen.

"We should not close this war until it is over. The sooner we come to realize the seriousness of the situation, the sooner will we come to give it our united strength.

HAS RISEN TO DEMOCRACY

"No one should criticize conscription, for conscription is the law of the land and the policy of the law. It is the first time this nation ever rose to true democracy in an hour of trial. It is merely saying that inasmuch as there is equality of privilege, there shall be equality of service.

"Nothing is needed so much in America as that we get the sober realization of the mighty sacrifice that will be demanded of us and that we as never before realize the mighty heritage we have."

The audience showed its appreciation of the musical numbers furnished by the college orchestra and members of the faculty of the department of music. A faculty quartet was composed of Elton Calkins, tenor; Miss Faye Richards, soprano; Miss May Carley, contralto; and Arthur Westbrook, bass. Solos by Professor Westbrook were well received.

PRESIDENT PRESENTS DIPLOMAS

Diplomas were presented by Dr. H. J. Waters, president of the college. The invocation was pronounced by the Rev. W. I. Jones, student pastor of the Manhattan Congregational church.

The graduates from the course in agriculture were Elmer G. Becker, Meriden; Karl Quisenberry, Newton; Henry E. Rahe, Winkler; Fred Robb, Scott City.

From the course in home economics were graduated Miss Bertha Altus, Garden City; Miss Ruth Hazel Branch, Manhattan; Miss Zelma Kyner, Sharon Springs; Miss Marie Long, Manhattan; Miss Edith Riley, Piedmont; Miss Clara Schober, Hiawatha. Walter O. Howell was graduated from the course in mechanic arts.

TUESDAY IS GIVEN OVER TO MEMBERS OF SENIOR CLASS

Student Assembly, Dedicatory Exercises, and Play Make Full Day

Tuesday was given over to the outgoing students. The student assembly was in charge of the seniors. Dedicatory ceremonies in connection with the class memorial were held in the afternoon, and the play, "A Pair of Sixes," was presented in the auditorium at night.

A spirit of patriotism is being left by the class as a memorial. A permanent memorial in the form of an elaborate flag staff will be put in place at some future date. Prior to that time the government will have use of \$500 paid by the class for Liberty bonds.

A committee has been named to arrange for the sale of the bonds and the purchase of the memorial. It will consist of the permanent class officers, together with H. H. King, associate professor of chemistry, and C. D. Thomas of Baxter Springs, member of the class who will serve as chairman. The permanent officers are O. K. Rumbel of Moran, president; Miss Laura Ramsey of Topeka, secretary; and H. J. Adams of Manhattan, treasurer.

W. E. Paterson of Yates Center read the class will and Leo C. Moser of Courtland, the class prophecy. Both were humorous and provoked much merriment.

CEREAL CONFERENCE MEMBERS VISIT EXPERIMENT STATION

Come to See College Work after Meeting in Kansas City

Members of the Interstate Cereal conference spent Friday as guests of the Kansas State Agricultural college. These men—30 of them—attended a three day meeting in Kansas City. They came to Manhattan in a private car.

These men are doing experimental work in experiment stations. While in Manhattan they inspected the work of the Kansas Agricultural Experiment station.

CHANCE FOR MORE GAIN

CO-OPERATION WOULD INCREASE LIVE STOCK PROFITS

Specialist in Agricultural Economics Suggests Possibility of Establishing Local Plants to Supply Product for Immediate Vicinity

That the profitability of Kansas live stock farming may be increased materially through coöperation is the belief of Theodore Macklin, in charge of agricultural economics in the Kansas Agricultural Experiment station.

"The farmer is specializing in the production of live stock in order to make a profit," said Mr. Macklin. "To secure this profit he must dispose of his products on the market at whatever price the given market can provide.

HOW MARKETS ARE CLASSIFIED

"Markets may be classified into two leading types from the standpoint of the distance between the farm and the consumer. There are at least two distinct market needs at the present time with but a single method of supplying facilities for taking care of them. There is the local market, and there is the surplus or distant market. The facilities—such as the large packers—supply the product not only for local markets but for distant markets. This condition exists because no adequate attention has been given to the possibility of establishing local packing plants in such a size as to supply just that amount of product which can be consumed within the local market.

"Without these local units the farmer has been obliged to ship his live stock much farther than necessary at considerable cost. Thus, as a producer, he loses an unnecessary portion of what otherwise could have been profit. Then, as a consumer, he has found it necessary to ship part of the same product back over an unnecessary distance again paying more in transportation and other costs than might be necessary.

FARMER SHOULD SEEK INFORMATION

"The farmer should demand information of a comprehensive character to show the feasibility of establishing local packing plants and slaughtering houses.

"Suppose the people in a given territory desire to profit and make savings by engaging in the slaughtering business and find after investigation that 100 per cent of the live stock produced is shipped to the distant market for sale and that of this 100 per cent 50 per cent is returned to the local community while the other 50 per cent is disposed of in distant communities. The organization would establish a packing plant and shipping station to which all the community stock would be sent. The manager of the coöperative packing plant, knowing the demand for meat products within his locality, would retain such quantities of live stock as could be slaughtered, packed, and sold within his local community. The live stock which could not be thus utilized for local consumption would thereupon be shipped to a large central coöperative packing plant designed for the sale of live stock products in remote markets."

DOCTOR REISNER LEAVES TO TEACH IN COLUMBIA

New York Institution Selects Member of College Education Department for Important Position

Dr. Edward H. Reisner, associate professor of education, leaves today for New York, where he will lecture in the summer session of Columbia university. Doctor Reisner has also been elected to teach in the regular sessions of Teachers college, Columbia university, and during the coming academic year will give instruction in the history and principles of education. He has resigned his position here.

Doctor Reisner holds bachelor's and master's degrees from Yale university, while his doctor's degree is from Columbia. He was assistant professor of education in the Kansas State Agricultural college in the year

1913-1914, since which time he has been associate professor. During the past year, in the absence of Prof. E. L. Holton, he has been acting head of the department of education and acting director of the summer session, in both of which positions he has shown marked ability. He has done efficient work in placing college graduates in teaching work. He is an unusually high scholarship, and has done considerable writing for scholarly magazines. He is an exceedingly successful teacher.

The summer session this year will be in charge of H. L. Kent, principal of the school of agriculture and associate professor of education.

IS SPELT IN CHARACTER

(Concluded from Page One)

But out of that agony we are going to rise to new conceptions of what our American life ought to be.

"The really important thing about the big sky scraper is the foundation down under the earth. It is because it has the right kind of a foundation and because an engineer with skill and brains laid that kind of a foundation that it is possible for that mighty structure to stand against the storms of nature.

WHY THE PIER FELL

"While on a vacation in Canada I watched the construction of an immense pier. I saw the engineers pouring great masses of rock and concrete down into the water and then it began to appear and before many weeks the great, smooth, wonderful structure stood there finished. Two days later more than half of it disappeared and the rest of it was broken and ruined.

"The engineers had not figured closely enough on their foundations. The rock on which they had built this structure was a sloping rock and because they did not anchor it securely enough and did not figure closely enough, the tremendous weight of concrete was too much for the foundation.

MUST CONSIDER FOUNDATIONS

"If you and I as individuals are going to stand before this wonderful life in which we are and give to it the conception and the ideals of real patriotism, we have got to consider the kind of foundations we are building.

"At the end of this week you will be given a little piece of paper to show that you have tried to lay the right kind of foundations. You have learned a great many things in the way of engineering, agriculture, and home economics. These are fine things but without knowing very much about it or thinking very much about it, you have been laying other kinds of foundations that are going to make you the man or woman that you are tomorrow.

WILL GIVE NEW IDEAL

"Spell out again in your personal character the word patriotism until it shines before you giving you a new ideal and conception of what the obligation and privilege of being an American man or an American woman is."

At the baccalaureate services the Rev. Allan Grant Wilson, priest in charge of St. Paul's church, Manhattan, acted as chaplain. A quartet consisting of Miss Faye Richards, Miss May Carley, Elton Calkins, and Prof. Arthur E. Westbrook sang Dudley Buck's "Festival Te Deum" in a most pleasing manner. The college orchestra, under the leadership of Prof. R. H. Brown, played several appropriate selections.

ROYAL PURPLE FOR 1917 HAS MANY ATTRACTIVE FEATURES

Class Annual Contains Good Material, Handled in Effective Style

The Royal Purple, the annual of the class of 1917, was published this week, and is a book of unusual attractiveness and interest. The material contained in the volume is of genuine interest and is well treated. The illustrations are good, and will be of permanent pleasure to the members of the class and other persons interested in the college and its life.

Henry J. Adams managed the book, and C. D. Thomas edited it.

GIVES DEGREES TO 180

(Concluded from Page One)

Wichita; Anna Monroe Neer, Cambridge; Helen Payne, Parsons; Clara Viola Peterson, Essex, Iowa; Hazel Luella Pierce, Severy; Nellie Pope, Hoxie; Nina Mae Powell, Athol; Fern Preston, Wichita; Elizabeth Quinlan, Manhattan; Laura Mary Ramsey, Topeka; Mildred Robinson, Salina; Fern Martha Roderick, Attica; Mabel Letitia Root, Centralia; Frieda Wilhelmina van der Smitten, Newton; Ellen Delpha Speiser, Garnett, Col.; Viola Stockwell, Larned; Alice Mae Sweet, Burlington; Corinne Pearl Sweet, Holton; Edith Tempero, Clay Center; Madge Rector Thompson, Hill City; Adelaide Rebecca Updegraff, Maple Hill; Mary Elizabeth Weible, Topeka; Vida Neil Wilson, Formoso; Winnie Fay Wilson, Formoso; Fay Emma Wright, Muskogee, Okla.; Matilda Louisa Ziller, Manhattan; Dorothy Etta Hadley, Topeka; Pansy Mary Jackson, Manhattan; Inez Eggert Kent, Franklin, Nebr.

DEGREES IN ENGINEERING

Bachelor of Science in Architecture—James Allison Hull, Stafford; Oliver Keith Rumbel, Moran.

Bachelor of Science in Agricultural Engineering—Jefferson Flora, Manhattan; Joe Anthony Novak, Ellsworth.

Bachelor of Science in Electrical Engineering—George Andrew Cunningham, Cheney; William Christoph Ernsting, Ellinwood; Carl David Hultgren, Topeka; Earl Kesinger, Greensburg; William Klooz, Manhattan; Robert Bruce Leydig, El Dorado; Frederick Hemmatt Nash, Farmington, Ark.; Russell Harry Oliver, Oxford; Paul Charles Rawson, Wamego; Lester Tubbs, Manhattan; Carl Adolph Wallerstedt, Lindsborg; Horace Alfred Williams, Sylvan Grove.

Bachelor of Science in Mechanical Engineering—Albert Cecil Arnold, Manhattan; Charles Cotting Brown, Ellsworth; Loren Lupfer, Larned; William Ewing Paterson, Yates Center; Gabe Alfred Sellers, Great Bend.

Bachelor of Science in Civil Engineering—Andrew Earl Dyatt, Alameda.

DEGREES IN GENERAL SCIENCE

Bachelor of Science—Lois Viola Bellomy, Manhattan; James Senter Brazelton, Wathena; Harry Ray Bryson, Manhattan; Vilona Cutler, Anthony; Lewis Albert Dubbs, Ransom; Stella Maude Harriss, Fairbury, Nebr.; Anna Howard, Manhattan; Keith Egleston Kinyon, Vernon; Riley Edward McGarraugh, Mulvane; Samuel James Molby, Manhattan; Oscar Wallace Park, Manhattan; Vera Grace Peake, Belleville; John Sellon, Kansas City, Mo.; Vera Whitmore, Manhattan.

Bachelor of Science in Industrial Journalism—Harold Wyllis Snell, Manhattan.

MISS SHINGLEDECKER WINS IN INDUSTRIALIST CONTEST

Freshman Student in Journalism Turns in Much Copy Spring Term

Miss Laura Shingledecker of Manhattan, freshman in industrial journalism in the Kansas State Agricultural college, was an easy winner in the spring term KANSAS INDUSTRIALIST contest. She is credited with 353 column inches of material as compared with 418 inches for her 26 competitors. H. Clyde Fisher of Lowmont, sophomore in industrial journalism, won second place.

Those deserving honorable mention in the contest are Miss Mollie Smith of Westphalia, sophomore in home economics; Miss Nadia Dunn of Manhattan, sophomore in industrial journalism; W. K. Charles of Republic, junior in industrial journalism; D. J. Borthwick of Manhattan, junior in animal husbandry; and Fred Carp of Wichita, junior in animal husbandry.

W. A. Lippincott, professor of poultry husbandry in the agricultural college, who is absent on leave, will receive the degree of master of science from the University of Wisconsin this month. He spoke for the initiates at the spring initiation of Sigma Xi, to which he was recently elected.

Alumni Number

THE KANSAS INDUSTRIALIST

Volume 43

Kansas State Agricultural College, Manhattan, Wednesday, July 18, 1917

Number 37

DICKENS HEADS ALUMNI

PROFESSOR OF HORTICULTURE IS PRESIDENT OF ASSOCIATION

Succeeds W. J. Burtis of Fredonia—Graduates to Form County Organizations—Would Keep Work of College Up to High Standard

Albert Dickens, '93, professor of horticulture in the Kansas State Agricultural college, is the new president of the Alumni association. He was elected to succeed W. J. Burtis, '87, of Fredonia.

Professor Dickens has been engaged in teaching almost since his graduation. For a time he was in charge of orcharding work, and later did high



ALBERT DICKENS, NEW PRESIDENT OF THE ALUMNI ASSOCIATION

school teaching. Since 1899, he has been a member of the horticultural department of the college, and for the last 15 years its head.

KIMBLE IS VICE-PRESIDENT

Samuel Kimble, '73, a lawyer of Manhattan and a former district judge, was elected vice president; Miss Frances Brown, '09, director of home economics in the college extension division, secretary; and Dr. J. T. Willard, '83, professor of chemistry and dean of general science, treasurer. The re-



W. J. BURTIS, RETIRING PRESIDENT OF THE ALUMNI ASSOCIATION

maining members of the board of directors are H. C. Rushmore, '79, Kansas City; George H. Failyer, '79, of Manhattan; H. W. Avery, '91, of Wakefield; Miss Mildred Inskeep, '12, of Manhattan; and Miss Margaret Haggart, '05, of Manhattan.

The personnel of the advisory council remains the same, consisting of H. W. Avery, '91, of Wakefield; George C. Wheeler, '95, of Topeka; J. W. Berry, '83, of Jewell City; Miss Bird E. Seecrest, '92, of Randolph; and Miss Frances Brown, '09, of Manhattan.

The annual business session of the Alumni association was of unusual interest. To roll call by classes, 65 persons responded, among whom were representatives of practically every class.

TO FORM COUNTY BODIES

County alumni associations will be formed at once, according to plans adopted by the association upon recommendation of the advisory council. It was also recommended that a new office be created in the college, the incumbent of which should have as a part of his duty the keeping of the records of the graduates and former students of the college. Part of the salary of the officer will be paid by the Alumni association. In line with this plan, permanent Alumni headquarters will be provided where data concerning former students will be readily available.

Keep the work of the institution up to a high standard in spite of war conditions, was the recommendation of the council. It was pointed out that the need for proper leadership during and after the war would be great, and that these leaders can be trained effectively only in such institutions as the college. The council recommended that the association cooperate thoroughly in the work of the college in this period of stress.

EAT CORN MEAL—IT IS CHEAP AND NUTRITIOUS

Cereals May Be Used in a Variety of Ways—Persons Should Learn to Like It, Says Dean Van Zile

Include corn meal in the diet and learn to like it. The qualities of corn meal have been underestimated, in the opinion of Mrs. Mary P. Van Zile, dean of the division of home economics in the Kansas State Agricultural college.

Bolted corn meal is now cheap as compared with other cereals. It costs about half as much as wheat flour, only a third as much as rolled oats, and a fourth as much as rolled wheat.

Corn meal has a high food value. Although the bolted meal does not supply so much tissue building material as wheat flour, it does supply more starch and fat. The unbolted corn meal, which is of good flavor and is preferred by many, has more tissue building material, as well as more starch and fat, than the wheat flour.

For a long time pellagra was supposed to be contracted through eating corn meal. Scientific investigation has proved that this is false and there is no danger from eating ordinary quantities.

Corn meal can be used successfully in a variety of ways. As a breakfast cereal, fruit mush, corn bread, or as corn griddle cakes it is a success from a nutritive as well as an economic standpoint. A satisfactory bread may be made by using one-half wheat flour and one-half corn meal.

The southern batter bread is liked by many persons. A good recipe for it comprises one-half cup of corn meal, one-fourth of a teaspoon of salt, one egg, and 1½ cups of sweet milk. Mix the dry ingredients and then add the milk and cook the mixture for 15 minutes in a double boiler. Add the egg and put all into a buttered dish. Set this in hot water and bake it moderately for 40 minutes.

High quality and large quantities, to be secured by standardization and cooperation,—these are of first importance to the small farmers who would get the highest prices.

The bureau of crop estimates, United States department of agriculture, estimates that 56 per cent of the apple crop is sold from farm or orchard, 10 per cent used in the manufacture of cider, 19 per cent used as food on the farm, and 15 per cent fed to live stock or wasted.

BACK TO ALMA MATER

HUNDREDS OF ALUMNI PRESENT AT COMMENCEMENT FESTIVITIES

Members of 34 Classes, Going as Far Back as 1873, Register at Graduate Headquarters in Anderson Hall

Alumni headquarters which were established in the southwest corner of Anderson hall proved a popular place during commencement week. W. E. Grimes, '13, and W. F. Turner, '05, with the assistance of several local alumni, kept open house for the visitors. Several hundred registered, representing 34 classes, and many more attended commencement who did not sign their names in the book.

The following is a correct list of those who registered:

Class of 1873—Sam Kimble, Manhattan.

Class of 1877—G. H. Failyer, Manhattan; Marion F. Leasure, La Cygne, attorney.

Class of 1883—Mrs. Phoebe Haines McKeen, 1401 Humboldt street, Manhattan; J. T. Willard, Manhattan, dean of the division of general science, professor of chemistry, Kansas State Agricultural college; Jacob Lund, Manhattan, engineer; J. D. Walters, Manhattan.

Class of 1887—Walter J. Burtis, Fredonia, farmer; F. G. Kimball, Manhattan; Mrs. F. G. Kimball, Manhattan; F. A. Marlatt, Manhattan.

Class of 1888—H. W. Jones, Topeka, teacher.

Class of 1889—Hattie L. (Gale) Sanders, Manhattan.

Class of 1890—W. H. Sanders, 826 Osage street, Manhattan, instructor in farm motors, Kansas State Agricultural college; S. C. Harner, Keats; Bertha (Kimble) Dickens, Manhattan.

Class of 1891—H. W. Avery, Wakefield.

Class of 1892—J. W. Hartley, Manhattan; Mrs. J. W. Hartley, Manhattan; Birdie E. Seecrest, Randolph.

Class of 1893—Albert Dickens, Manhattan, horticulturist, Kansas State Agricultural college.

Class of 1894—Clara F. Castle, Manhattan; J. S. Odle, Westmoreland.

Class of 1895—Ada Rice, Manhattan, assistant professor of English, assistant principal of school of agriculture, secretary of Alumni association; George A. Dean, entomologist, Kansas State Agricultural college; G. C. Wheeler, Topeka, editor of Kansas Farmer; Myrtle (Smith) Wheeler, Topeka, housewife; O. H. Halstead, Manhattan.

Class of 1896—Mrs. Inez (Palmer) Barrows, Clifton; I. A. Robertson, Alma, merchant; Marion E. (Jones) Pincomb, Lenexa.

Class of 1897—Ina A. Holroyd, Manhattan; B. K. Hull; Mrs. B. K. Hull.

Class of 1898—Alice M. Melton, 804 Moro street, Manhattan; William Anderson; Hope Brady Anderson; Bessie Locke Noble, Manhattan; R. H. Brown, Manhattan, music department, Kansas State Agricultural college; Bertha (Spohr) Smith, Topeka; Anna M. Davis, Manhattan; Schuyler Nichols, Herington; Cora (Ewalt) Brown, Manhattan.

Class of 1899—Grace E. Champlin, Manhattan.

Class of 1900—George O. Greene, Manhattan; Minerva (Blachly) Dean, Manhattan.

Class of 1901—Charles A. Scott, Manhattan, professor of forestry, Kansas State Agricultural college, state forester; R. C. Faris, Equitable Powder Mfg. Co., East Alton, Ill., engineer; Trena (Dahl) Turner, 608 Bluemont avenue, Manhattan, housewife; H. C. Turner, Fort Baird, New Mexico; Helen (Knosman) Pratt, Manhattan; S. J. Pratt, Manhattan.

Class of 1902—L. A. Fitz, Manhattan, professor of milling.

Class of 1903—The Rev. R. A. Esdon, Garnett, Kan.

Class of 1904—Carl P. Thompson, Manhattan, specialist in animal husbandry, extension division, Kansas State Agricultural college; Roy A. Seaton, Manhattan; Mary (Davis) Ahearn, Manhattan.

Class of 1905—A. F. Turner, Manhattan, assistant county agent leader, Kansas State Agricultural college; H. Umberger, extension division, Kansas State Agricultural college; L. W. Fielding, Manhattan, grain business; Margaret H. Haggart, Manhattan; Crete (Spencer) Fielding, Manhattan; G. O. Kramer, Zeandale; Arthur J. Rhodes, Manhattan, city engineer.

Class of 1906—Gertrude (Hale) Campbell, Wilmette, Ill.; C. W. McCampbell, Manhattan; Ruth Cooley, Manhattan; E. D. Richardson, Cawker City.

Class of 1907—Florence (Sweet) Evans, 343 Lawn Ave., Kansas City, Mo.; Wilson G. Shelley, McPherson, farmer; Ethel McDonald, Manhattan; Miner M. Justin, Ogden, Utah, in bureau of crop estimates, United States Department of Agriculture; E. G. Schafer, W. S. C., Pullman, Wis., agronomist; Alfred H. Baird, Minneapolis; F. W. Grabendike, Wichita; C. J. Gore, Raymore, Mo.; Jack M. Ryan, Muscotah, farmer; Mrs. C. J. Gore, Raymore, Mo.

Class of 1908—Mr. O. H. Gish; Mrs. O. H. Gish, Lincoln, Nebraska; Mrs. Erma (Gammon) Ryan, Muscotah; Helen (Huse) Collins, Baldwin; Frank C. Harris, Manhattan.

Class of 1909—Frances L. Brown, Manhattan, Kansas State Agricultural college; Mrs. Edith (Jones) Iles, Manhattan; W. J. King, Parsons; Effie Morrow, Blue Rapids; Dr. E. F. Kubin, McPherson.

Class of 1910—W. P. Shuler, Stillwater, Okla., assistant professor of veterinary medicine; Blanche Vanderlip, 916 Leavenworth street, Manhattan; William M. Orr, Isabela, Porto Rico, missionary; W. F. Turner, Amherst, Mass., animal husbandry extension, Massachusetts Agricultural college; Mrs. Mabel (Alvord) Purdy, Manhattan; Ethel (Justin) Marshall, Burlingame; Viola Hepler, Manhattan; Gladys (Nichols) Dearborn, Manhattan; E. H. Dearborn, Manhattan; Emma Lee Kubin, McPherson.

Class of 1911—G. E. Thompson, 1821 Leavenworth street, Manhattan, specialist in farm crops, division of extension; Mildred K. Huse, Manhattan, assistant to registrar, Kansas State Agricultural college; Bert J. McFadden, Stafford; G. H. Roots, Centralia; Pearl S. Roots, Centralia; Bertha E. Phillips; Effie Adams, Manhattan, teacher; Dora Otto, Manhattan.

Class of 1912—D. F. Mossman, Eskridge; W. T. Hole, 1609 Tyler street, Topeka; O. E. Giger, Elmdale; Mrs. O. E. Giger, Elmdale; J. W. McCulloch, Manhattan; Dave Gray, Manhattan, animal husbandry department, Kansas State Agricultural college; Kenneth W. Phillips, Manhattan; D. C. Clarke, science teacher in York (Nebr.) high school; Catherine Justin, Manhattan; Berta Chandler, Kansas State Agricultural college, stenographer; Mary Catherine Williams, 1108 Van Buren, Topeka; Alice (True) Shaw, Holtville, Calif.; Veva (McCray) Fry, Miami, Okla.; Clarence G. Fry, 120 B street, N. E., Miami, Okla., high school principal; Eula (McDonald) Orr, Isabela, Porto Rico; Ed. Isaac, teacher, Iowa State college, Ames, Ia.; Mrs. J. A. Vohringer (Irene McCreary), Manhattan, clerk, extension division, Kansas State Agricultural college; E. W. Denman, Pittsburg, Penn., Westinghouse Electric and Manufacturing company, engineer; Mrs. Etta (Sherwood) Earl, Manhattan.

(Concluded on Page Four)

DINNER IS BIG SUCCESS

ALUMNI EVENT ATTRACTS MORE THAN 400 GUESTS

Resolutions Are Passed in Appreciation of Services of Retiring Board of Administration—Addresses by Graduates and Others

Under the direction of Miss Margaret Haggart, '05, and her committee, the commencement dinner was a notable success. With the Junior girls as waiters, and a number of college boys as their assistants, the dinner was served to nearly 400 guests, 86 of whom—members of the class of 1917 in academic costume—were the guests of honor of the association.

At the speakers' table were President and Mrs. Henry Jackson Waters; Doctor Thompson, president of the Ohio State university, who delivered the commencement address; the members of the out-going board of administration, E. T. Hackney of Wellington, E. W. Hoch of Marion, and Mrs. Cora G. Lewis of Kinsley; Dean and Mrs. J. T. Willard; Prof. and Mrs. Albert Dickens; Walter J. Burtis, president of the association; and Dean Mary Pierce Van Zile.

ALUMNI SEATED BY CLASSES

Wherever possible the alumni were seated by classes. President Burtis, was at ease as a toastmaster, and in an appropriate manner welcomed the class of 1917 into the Alumni association. Miss Rose Baker responded in behalf of the class.

Humphrey Jones, '88, of Topeka, author of the college song, "Alma Mater," was called upon and gave an excellent impromptu speech in which he sounded a note of warning in regard to the use of spare time by the American youth.

President Thompson responded to the call of the chairman in a happy, earnest speech discussing modern tendencies in education and other activities.

RESOLUTIONS TO BOARD MEMBERS

President Waters, who was next called upon, presented resolutions in appreciation of the services of each member of the board of administration. Dean Willard in an appropriate, vigorous speech moved the adoption of the resolution relating to Mr. Hackney. It was carried unanimously. Led by Mr. Hull of the senior class, three cheers were given for Mr. Hackney, and at the call for a speech, Mr. Hackney responded in his usual effective manner.

Dean Van Zile moved the adoption of the resolution dealing with Mrs. Lewis' service, and it was carried by a rising vote. Cheers were given for Mrs. Lewis, and, called upon to speak, she responded with an address expressing feelingly her deep interest in the college.

Professor Dickens moved the adoption of the resolution concerning Mr. Hoch's services. It was unanimously carried. Again three cheers were given, and Mr. Hoch responded with a forceful address.

The resolutions as presented to the members of the board are printed on page three.

The dinner closed with the singing of "Alma Mater" by all, led by H. W. Jones, '88, author of the song.

BOYS IN NATIONAL SERVICE GET MEDALS FROM AERO CLUB

Flora and Payne Are Awarded Prizes for Papers Presented at Seminar

J. H. Flora, a senior student in engineering, and Amos Payne, freshman in the same division, have been awarded medals on their papers on "Aeronautics" which they presented last fall at the engineering seminar. The Aero Club of America made the awards.

Mr. Flora holds a commission in the officers' reserve corps, while Mr. Payne is in the marine corps.

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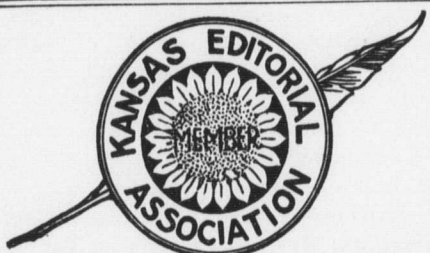
H. J. WATERS, PRESIDENT Editor-in-Chief
N. A. CRAWFORD Managing Editor
J. D. WALTERS Local Editor
ADA RICE, '95, M. S. '12 Alumni Editor

Except for contributions from officers of the college and members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism. The mechanical work is done by the department of printing. Of these departments Prof. N. A. Crawford is head.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The price of THE KANSAS INDUSTRIALIST is 75 cents a year, payable in advance. The paper is sent free, however, to alumni, to officers of the state, and to members of the legislature.

Entered at the post-office, Manhattan, Kan., as second-class matter October 27, 1910. Act of July 16, 1894.



WEDNESDAY, JULY 18, 1917

A DESERVED HONOR

The election of Albert Dickens to the presidency of the Kansas State Agricultural College Alumni association is an honor well deserved, and honor that receives the commendation not only of graduates and former students but of all persons who know the college and are interested in its welfare.

Brought up in Kansas, Professor Dickens has been closely associated with the work of the college for nearly 30 years. He holds two degrees from the institution, bachelor of science, conferred in 1893, and master of science, conferred in 1901. For most of the time since his graduation, he has been on the faculty of the college. No instructor has been more thoroughly liked and respected, none has shown more appreciation of the mental attitude and the problems of the boys and girls who come to the college, than has Professor Dickens. In like manner he has exhibited a keen understanding of the needs of the state, not only in his particular field, horticulture, but in general.

Professor Dickens has, moreover, been for years prominent in the Alumni association. He has held numerous offices and committee positions, the duties of which he has fulfilled with scrupulous care and vigorous energy. Much of the enormous labor involved in preparing the "Record of the Alumni" was performed by him. Professor Dickens' interests, his experience, and his abilities indicate that important work may be expected from the Alumni association during this year of world stress and anxiety.

THE COUNTRY PLACES

In the highlands, in the country places,
Where the old plain men have rosy faces,
And the young, fair maidens quiet eyes.
—Stevenson.

FIRES ON THE FARMS

In this campaign to increase the food supply of the country and of the world, conservation is quite as important as production. The grain and meat and other foodstuffs now here must be preserved from wasteful destruction while additional supplies are being produced. Fires destroy millions of bushels of grain and thousands of cattle every year, and it is the duty of the patriotic citizen to reduce this preventable and criminal waste by every means in his power.

An important responsibility rests upon the farmer in this matter. The council of national defense, working through the state councils and the fire marshals, and with the invaluable cooperation of the inspectors of the stock and mutual fire insurance companies, is making an inspection of all the grain elevators, flour mills, packing plants, and food warehouses of

the country, with a view to reducing the hazards of fire. In this the cooperation of the owners is expected, and is being given, as a patriotic duty in this time of national crisis. But this force of inspectors cannot go out of the cities and towns, and yet there is an enormous amount of foodstuffs on the farms which it is equally important to protect against the hazards of fire. This work is up to the farmer himself, and in doing it he is not only protecting his own property and family, but is doing his bit in the vitally important work of conserving the food supplies of the world.

The great majority of the fires are due to carelessness, and under existing conditions carelessness is a crime. The ordinary common-sense precautions are all that is necessary. Be careful about smoking, matches, and lights, remember the hazards of gasoline, keep a barrel of water or a box of sand ready for emergencies, have your barns rodded properly against lightning, clean up the rubbish in which a fire is likely to start, and you will be doing your share as a patriotic citizen in a time of national need. —Farmers Mail and Breeze.

A QUARTER OF A CENTURY AGO

Items from the Summer Number of The Industrialist, 1892

The fall term will open September 14. Miss Florine Secrest, '89, has returned from California.

H. Darnell, '92, is attending the Alma institute.

Mr. and Mrs. Breese are visiting relatives in Chase county.

The carpenters are building a large wall case for mineralogical specimens.

C. A. Campbell, '91, visited Ottawa this week collecting for the horticultural department.

W. E. Whaley, '86, is at home after a year's study in Northwestern university, Chicago.

A powder magazine is being built on the bank of the stream north of the horticultural barn.

Professor Walters has just completed original drawings for the steeple on the new German church in Manhattan.

The water running from two fire hose is barely sufficient to break the backbone of the drouth in the limited area of the principal lawns.

The mechanics in the iron shop are busy with repairs of the wood working machines, which will soon be in readiness for another year's work.

This issue of THE INDUSTRIALIST somewhat exceeds 13,500, and is the last for the college year. The first number of volume 18 will be printed August 20.

A better looking potato field one could not wish to see than that of the horticultural department. With favorable weather a good crop of many of the kinds is assured.

The farm department has two fine shorthorn bulls for sale, coming two years old in the fall. If you need a good bull, write to Professor Georgeon for prices on these.

Miss Abbie Marlatt, '88, has finished her second year's work as professor of domestic economy in the Utah Agricultural college at Logan, and is at home for a visit of two months.

The rapidly increasing number of pipes has led the mechanical department to prepare a plat of grounds and buildings, showing the location of every water, steam, gas, sewer, and drain pipe on the premises, with all valves. Such a chart has long been needed, and now that it is accessible in Professor Hood's office will early prove its convenience.

The Kansas City Journal announces the marriage of Frank L. Parker, '86, to Miss Robbie Edgington, second-year in 1883-4, on June 23, at the home of the bride's parents in Morse, Kan. Mr. Parker is manager of the Atchison, Topeka, and Santa Fé railway telegraph office at Pueblo, Colo. The bride has been teaching in the Argentine schools. Miss Mattie E. Toothaker, second-year in 1888-9, was a bridesmaid.

A Message to the Alumni

ALBERT DICKENS

President of the Kansas State Agricultural College Alumni Association

IT IS gratifying to note that the great body of graduates and former students of the state schools have been nobly responsive to the country, a call for service. Every training camp, every Red Cross unit, every section of the formative organizations for offensive or defensive action, is being strengthened by the men and women who have been trained for service in the colleges, universities, and normal schools which have been endowed and supported by the nation and the states.

These great duties are particularly the privilege of the student trained in the land grant colleges. These institutions were conceived and born in the great conflict which decided for that time that governments of the people, organized and executed by their representatives, are as firmly founded as those which rest upon any supposed divine right of kings. These colleges by their charters were required to support departments of military training, and whether always popular or not, the idea of the possible need of arms and of soldiers is always a part of the atmosphere of the institution. Every year the commandant certifies to the war department of the nation the names of a few most highly qualified for military service. This distinction, at first looked upon as an empty honor, has come to be highly appreciated. During the war for Cuban freedom a considerable number of men from these schools were found to be competent and even able leaders; and in the present world crisis the men trained in these schools are an element of strength not to be lightly estimated. The sometimes overworked phrase, "education for service," proves an epigram of benediction, for the men and women who have been taught that work is a duty, a privilege, a blessing, are found in every locality helping to prepare to win this war. It may be in the days to come that this war for democracy will be won by the men who can best produce food and the women who can best conserve it.

Kansas State Agricultural college graduates and former students have heard the call and are "on the job." Colonel "Jim" Harbord, '86, is General Pershing's chief of staff. Bill Murphy, '17, farmers' short course, writes that he is using all the daylight and all the energy of four good mules trying to make the Kansas acres for which he is responsible "do their damndest." Every man and woman from Emma Haines Bowen, '67, to Edward Zimmerman, traction short course, '17, is in line somewhere. Your name is on the rolls of the Kansas State Agricultural college, and while your postoffice address may be unknown, still we know that you are "ALL present or accounted for."

We want that postoffice address, by the way. You are at least a little better fitted for service than some of your neighbors and we want to have you where we can get "squad orders" to you if you are only a corporal. "Only a corporal," but you may be the strength of a tired private whose mistakes need watching and upon whose last shot the battle may depend. The boys who are shocking wheat and stacking alfalfa are more uncomfortable today under the hundred and some-odd degree Kansas sun than the boys who are getting the last finish of their drill on the fields of France or wearing a marine's uniform in Honolulu or Panama. It augurs well for democracy that these sunburned, sweaty boys are being given their full measure of praise and that the world sees patriotism and devotion in every service that is faithfully performed. The maid of 1917 wastes but little time to "bind her warrior's sash." She is rolling bandages while she prays that the war may be over before her hero gets to the trenches.

The practical education given by the schools of today is an enormous asset in this crisis. And we must use every ounce of our resources. Let us spend our money while it buys most. In order to do this most effectively we want the alumni to organize in every community, in every county. We want some men in every locality to get the men and women who have been on the class rolls of the college together and have them ready to help in the plans and in the execution of the great tasks that are to come. We want no close communion proposition. We want every one who has felt a thrill when he heard "K. S. A. C., carry thy banner high." The old student, and all are "old students" at the end of their first term, has two thrills where the rest of the world has one. "Alma Mater" receives the same salute as the "Star Spangled Banner."

Do your whole duty. In addition to plans for food drives, Red Cross, or recruit camps, in addition to your economies and the Gospel of the Cleaned Plate, take a long look ahead. If this war lasts three years, or five years, if the worst comes and the ships going east with the young heroes salute the ships coming home with the silent ones, where shall we get our leaders for the fields of horror and the fields of wheat? Look about you and see that the good material is trained. Send a boy and a girl to a college, to a training camp for citizens—please God for peace, but for war if the price must be paid. A year at college may mean more to the nation if we can train a leader than anything else we can do. Let us every one try to help fill the ranks of the college classes for next fall with the best we have. The world will need leaders more than ever in the great reorganizations which must come after the "world is made safe for democracy." We must furnish trained men and women to rebuild the industries and the homes of Belgium and the other war-worn lands. Plan to send a student, for war if we must, for peace if we may.

SMELLS

(From the anonymous "Masque of Poets," in the Bookman)

Why is it that the poets tell
So little of the sense of smell?
These are the odors I love well:

The smell of coffee, freshly ground;
Or rich plum pudding, holly crowned;
Or onions fried or deeply browned.

The fragrance of a fummy pipe;
The smell of apples, newly ripe;
And printers' ink on leaden type.

Woods by moonlight in September
Breathe most sweet; and I remember
Many a smoky campfire ember.

Camphor, turpentine and tea,
The balsam of a Christmas tree,
These are whiffs of gramarye. . . .
A ship smells best of all to me!

SUNFLOWERS

Nowadays a king has about as much chance as a married man.

What has become of that song we used to hear about not raising our boys to be soldiers?

Every time the Kaiser makes a speech, we have less respect for the German people—for listening to him.

WARNING: If the cost of living goes any higher, we are just naturally going to have to embezzle something.

Just as soon as American young-manhood gets used to wrist watches and shrapnel, the end of the war will begin.

THE LAST CHANCE

If I had no money and didn't feel well,
I might be caught crying "oil stock to sell."

To sing "The Star Spangled Banner" with a ukelele accompaniment ought to be made punishable by death from gunshot wounds.

King George of England is the best real sport of the year. He ordered that the Stars and Stripes wave over Parliament on July 4. We are now backing him against all comers.

FIVE WAYS TO END THE WAR

Hoe the Hohenzollerns.
Kipper the Kaiser.
Oust the Austrians.
Jip the Germans.
Prune the Prussians.

HELPIN' UNCLE SAM

Lettuce in the front yard,
Beans along the walk,
Sweet potato vines around the house;
Parsley in the posey bed—
That's the kind o' talk—
Poison for the pesky radish louse.

Spinach in the wash tub,
Melons in the bath,
Cantaloupes a growin' in the sink;
Peas in the porch box,
Carrots 'long the path—
Ornamental verdure on the blink.

Yard full o' parsnips,
Radishes and such,
Rutabaga, corn, an' good ole yam;
Little bit of everything
Makes a lot of much—
That's the way we're helpin' Uncle Sam.

—HWD.

INSTINCT VS. INTELLIGENCE

Man with his intelligence ought to be able to read weather signs as well as the animals and the birds do, but he is not. This sense, which we call instinct, is superior to intelligence in such matters. How does the squirrel, the beaver, or the muskrat forecast the coming of a hard winter and make preparation for it? Why will rats leave a city foredoomed to an outbreak of plague? How do the wild fowl sense the coming change of weather 36 hours ahead? How does a song bird wintering in Central America find its way back to its old nesting place in the tree in your dooryard? Man applies science where the lower forms of creation use instinct, makes his deductions, and is more often wrong than right, while the birds and animals are always right. —Rocky Mountain Husbandman.

AMONG THE ALUMNI

W. T. McCall, '08, is state club leader in Idaho.

W. O. Peterson, '97, is taking work in the summer school.

Miss Mabel Hinds, '17, will teach in Butler, Mo., next year.

G. Wiley Brown, '13, of Ellsworth, will teach at Hardin, Mont.

R. E. Lofinck, '16, will teach in the Rosedale high school next year.

Miss Isla Bruce, '16, taught home economics at Oskaloosa last year.

Miss Mary Dunlap, '16, will teach home economics in Peabody, Kan.

Miss Evelyn M. Potter, '15, of Barnes, will teach home economics at Agenda.

Carl F. Huffman, '17, will teach in the Tonganoxie high school next year.

John V. Hepler, '15, will teach agriculture in the Iola high school next year.

Ed. Isaac, '12, is teaching horticulture in the Iowa State college, Ames, Iowa.

D. C. Clarke, '12, will teach science in the York (Nebr.) high school next year.

Clyde McKee, '10, is associate professor of farm crops in the Iowa State college.

Miss Ruth Aiman, '15, will teach home economics in Fairbault, Minn., next year.

Miss Effie Adams, '11, is teacher of domestic science in the Kansas City high school.

J. B. Sweet, '17, is assistant in experimental breeding in the University of Wisconsin.

Doddridge C. Tate, '16, is equipment engineer for the Western Electric company, Chicago.

Jay Stratton, '16, of Mulvane, is orchard manager for the Central States Orchard company.

Miss Ruth Adams, '16, has been elected to teach home economics in the Lyons high school.

Dr. Albert T. Kinsley, '99, is professor of pathology in the Kansas City Veterinary college. Dr. Richard F. Bourne, '03, is professor of histology and physiology in the same institution.

L. R. Alt, '16, of Nortome, Md., is teaching agriculture and manual training in Little River, Iowa.

THE ALUMNI LOAN FUND

A year ago the Alumni association adopted a plan by which alumni, on payment of \$20 each, are relieved from further regular dues and are designated as life members. The money so obtained constitutes a loan fund which is lent at 5 per cent to worthy and needy students. The fund is administered by a committee appointed by the board of directors. On July 1, it amounted to \$1,500.

In the year loans have been approved to 14 students in amounts ranging from \$25 to \$200 for lengths of time varying from four months to five years. The total amount of these loans is \$1,295. Most of these are for a few months only. It is the policy of the committee to lend small sums for short times to tide over unforeseen shortages of resources, rather than to tie the funds up in long time loans. In this way many more share in the benefits of the fund.

Alumni are urged to make this enterprise a strong one in their sympathies and by their acts. Contributions to the fund may be made by anyone, and should be sent to the secretary, Miss Frances L. Brown, Manhattan, Kan. Those who have pledged themselves are urged to pay in the life membership fee at as early a date as possible.

Charles R. Adamson, '17, will next year be on the staff of the University of Arizona, Tucson, Ariz.

George H. Railsback, '14, is instructor in manual training and agriculture in the Peabody high school.

Miss Marie A. Boyle, '15, of Spivey, taught home economics in the public schools at Ulen, Minn., last year.

Miss Mary Weible, '17 of Topeka, will teach in the Bloomfield Indian school, Ardmore, Okla., next year.

Miss Lynne Hilsabeck, '13, will return to her work as teacher of domestic science in Phoenix, Ariz., next year.

Charles A. Hunter, '15, will be assistant professor of bacteriology and botany, University of Florida, next year.

Miss Virgie G. Sherwood, '12, has accepted a new position. She will teach English next year in the Lucas high school.

Miss Nettie Hendrickson, '16, of Manhattan, will teach domestic science and art at Argona next year.

Miss Mary L. Taylor, '16, of Manhattan, is teaching in a mission school in the Kentucky mountains.

Mrs. Marion (Jones) Pincomb of Kansas City, with her four children, is visiting her parents in Manhattan.

Mrs. Daisy (Harner) Roehm, '09, of Oshkosh, Wis., with her two children, is visiting at the home of her parents in Manhattan.

The Rev. M. F. Collins, a former student, has been appointed chaplain in the army. Mrs. Collins was Miss Helen Huse, '08.

Mrs. Stella (Kimball) Tucker, '94, has returned to her home near Arcadia, Fla., after an extended visit with her parents and friends.

Mr. and Mrs. Charles E. Lyness, '12, were among the commencement visitors. They were on their way from their home in New Richland, Minn., to spend their summer vacation near Denver, Col.

Miss Marcia Tillman, '16, has completed a successful year as instructor in language and science in the Lyndon high school. She will spend part of the summer on her parents' ranch in Coffey county.

G. W. Putnam, '16, has finished his year's work as graduate assistant in farm crops in the Michigan Agricultural college, and is now located on a farm near Delavan, in partnership with Dr. W. A. McCullough, '98.

H. O. Dresser, '14, has gone to New York, where he will be physical director in the Englewood school. Mr. Dresser recently completed a course in the International Young Men's Christian Association college, Springfield, Mass.

J. Ralph Little, '15, spent a short time in Manhattan recently visiting friends. Mr. Little teaches manual training and agriculture in the high school at Holton. This summer he is traveling for the Kansas Industrial Welfare association.

Miss Ada Rice, '95, gave the commencement address for the eighth grade graduates from the Riley county schools Tuesday afternoon, June 19. There were 150 graduates. The exercises were held in the high school auditorium at Manhattan.

L. C. Criner, '92, has just had a bit of good luck. Several years ago in a trade he received a piece of land near El Dorado. This spring he struck oil and since April has been receiving a royalty of \$300 a month. Now a second well is opened on his land.

Dr. D. M. Campbell, student in 1904 and 1905, and Mrs. Gertrude (Hole) Campbell, '06, accompanied by Mrs. Campbell's sister, Miss Bertha Hole, '16, are making an automobile trip through Colorado and Yellowstone National park. Doctor Campbell is editor and publisher of the American Journal of Veterinary Medicine and of a number of books on veterinary subjects.

The class of 1912 held a breakfast in Lovers' Lane Thursday, June 21. Although the class is widely scattered, 31 members were back for this reunion. Among those who came from

Greetings to Retiring Board

As Adopted at Commencement Dinner

TO THE
HONORABLE ED. T. HACKNEY:

THE ALUMNI, THE STUDENTS, AND THE FACULTY OF THE KANSAS STATE AGRICULTURAL COLLEGE DESIRE TO EXPRESS TO YOU, AS PRESIDENT OF THE STATE BOARD OF ADMINISTRATION, THEIR DEEP AND PERMANENT APPRECIATION OF YOUR KEEN INTEREST, YOUR DOMINANT LEADERSHIP, AND YOUR EFFICIENT SERVICE. THEY UNITE IN THIS PUBLIC EXPRESSION OF GRATITUDE FOR YOUR INTELLIGENT, HONEST, AND UNSELFISH ADMINISTRATION OF THE INSTITUTION. FOR YOUR CONTRIBUTION TO THE UNIFICATION OF THE EDUCATIONAL FORCES OF THE STATE, THE CITIZENS OF KANSAS ARE UNDER DEEP AND LASTING OBLIGATION.

H. J. Waters

PRESIDENT OF THE COLLEGE.

Walter J. Burtis

PRESIDENT OF THE ALUMNI ASSOCIATION.

TO THE
HONORABLE CORA G. LEWIS:

THE ALUMNI, THE STUDENTS, AND THE FACULTY OF THE KANSAS STATE AGRICULTURAL COLLEGE DESIRE TO EXPRESS TO YOU, AS A MEMBER OF THE STATE BOARD OF ADMINISTRATION, THEIR DEEP AND PERMANENT APPRECIATION OF YOUR CLEAR INSIGHT INTO THE SPIRITUAL AS WELL AS THE MATERIAL WELFARE OF THE INSTITUTION. YOUR SERVICES HAVE BEEN ESPECIALLY DISTINGUISHED IN THE FIELDS OF THE CULTURAL AND THE ESTHETIC, EXEMPLIFYING IN A VERY PRACTICAL WAY THE HIGH SERVICE THE WOMANHOOD OF KANSAS CAN RENDER IN INTELLIGENT PUBLIC LIFE.

H. J. Waters

PRESIDENT OF THE COLLEGE.

Walter J. Burtis

PRESIDENT OF THE ALUMNI ASSOCIATION.

TO THE
HONORABLE EDWARD W. HOCH:

THE ALUMNI, THE STUDENTS, AND THE FACULTY OF THE KANSAS STATE AGRICULTURAL COLLEGE DESIRE TO EXPRESS TO YOU, AS A MEMBER OF THE STATE BOARD OF ADMINISTRATION, THEIR DEEP AND PERMANENT APPRECIATION OF YOUR WISE COUNSEL, YOUR DISCRIMINATING JUDGMENT, AND YOUR SYMPATHETIC DEVOTION TO THE BEST INTERESTS OF KANSAS EDUCATION. YOU HAVE BROUGHT TO THE ADMINISTRATION OF THIS INSTITUTION THE RESULT OF YEARS OF PUBLIC CONFIDENCE AND OF CONSPICUOUSLY SUCCESSFUL EXPERIENCE IN PUBLIC LIFE. WE ASSURE YOU OF OUR LOYAL CO-OPERATION IN THE GREATER SERVICE YOU ARE CALLED UPON TO RENDER THE STATE AS A MEMBER OF THE NEW BOARD OF ADMINISTRATION.

H. J. Waters

PRESIDENT OF THE COLLEGE.

Walter J. Burtis

PRESIDENT OF THE ALUMNI ASSOCIATION.

the greatest distance were Eula McDonald Orr and her husband, who have been at Isabela, Porto Rico for two years; E. W. Denman of Wilkinsburg, Pa.; and C. E. Lyness of New Richland, Minn.

In 1912 the class had 230 members and four associate members; that is, wives or children. In the past five years death has come to four of the class, Harry Schuler, Katie (LaMont) Bolinger, Guy Pingree, and David Goldsmith. During this time we have gained 96 wives or husbands, and 38 children. Therefore the present membership of the class is 360. There yet remain unmarried 77 men and 46 women. There were few marriages within the class, only seven boys of the class choosing 1912 girls for wives.

The following members answered to roll call: J. H. Anderson and Mrs. Anderson, Topeka, Kan.; Justina Andrews, Oberlin, Kan.; Ethel Bales, Manhattan; Amy (Bachelor) Collins, Manhattan; Berta Chandler, Manhattan; E. W. Denman and Mrs. Denman, Wilkinsburg, Pa.; Clarence Fry and Viva (McCray) Fry, Miami, Okla.; O. E. Giger and Celia (Moore) Giger, Elmdale, Kan.; J. H. Goheen, Manhattan; B. F. Hillebrandt and Mrs. Hillebrandt, Kansas City, Mo.; Juanita Hoke, Manhattan; Ed Isaac, Ames, Ia.; Catherine Justin, Manhattan; C. E. Lyness and Mrs. Lyness, New Richland, Minn.; Eula (McDonald) Orr and Mr. Orr, Isabela, Porto Rico; Myra (Munger) O'Neal, Hope, Kan.; Selma Nelson, Manhattan; Jessie (Nichols) Fenton, Blue Rapids, Kan.; E. A. Ostlund, Clyde, Kan.; Essie Schneider, Manhattan; Etta (Sherwood) Earl, Luray, Kan.; Virginia Sherwood, Codell, Kan.; Grace (Terhune) McCall; Alice (True) Shaw, Holtville, Calif.; Katherine Tucker, Chapman, Kan.; Mary Lee Turner, Manhattan; Louis Williams, Manhattan; Mary C. Williams, Topeka, Kan.; Matilda Wilson, Manhattan.

Officers elected for the coming year are: President, Louis Williams; vice-president, Essie Schneider; secretary-treasurer, Matilda Wilson.

BIRTHS

Born, to Mr. George Eugene Maroney, '12, and Mrs. Faith (Curl) Maroney, Salt Lake City, Utah, on May 30, a son, George Eugene.

MARRIAGES

SLEE-BLAIR

Miss Annie Mary Slee and Mr. Otis Neel Blair, '04, were married at Burley, Ida., on Wednesday, June 27. They are now at home at Paul, Ida.

STEPANEK-YEAGER

Miss Arline Stepanek and Mr. Albert F. Yeager, '12, were married Wednesday, June 27, at Crete, Nebr. They will be at home after July 25 at State College, Pa.

ALEXANDER-HILL

Miss Elma Inez Alexander and Mr. Thomas Newton Hill, '09, were united in marriage on Tuesday, June 26, at the home of the bride in Fountain City, Ind.

GUY-ROOT

Miss Marguerite Marie Guy and Mr. Irving Campdoras Root, '12, were married in Kansas City, Mo., Saturday, June 3. They will make their home in Cambridge, Mass.

BROBERG-TOWNLEY

Mabel May Broberg, '12, and the Rev. Mr. David Townley were married in Manhattan June 20. Mr. Townley is pastor of the First Presbyterian church at Lyons, Kan.

MCGEOCH-WOLCOTT

Miss Gertrude Pearl McGeoch and Dr. Charles Clements Wolcott, '13, were married in Bay City, Mich., Monday, July 2. They are now at home 169 Columbia Heights, Brooklyn, N. Y.

DAVIS-HAINES

Miss Julia Gertrude Davis of Wichita Falls, Texas, and Mr. Charles Myer Haines, '09, were united in marriage at the home of the bride in

Wichita Falls on Saturday, June 16. They motored to Manhattan and will spend part of the summer with Mr. Haines' parents.

MYERS-GATEWOOD

Miss Corinne Myers, '16, and Mr. Ray Algood Gatewood were married at the home of the bride's parents, Mr. and Mrs. Wesley J. Myers, in Marion, Ohio, Wednesday, June 27.

Mr. Gatewood, who is a graduate of the Iowa State college, is instructor in animal husbandry in the Kansas State Agricultural college, and Mr. and Mrs. Gatewood will make their home in Manhattan.

PECK-CALVERT

Miss Esther Peck and Mr. William Cecil Calvert, '16, were married in St. Joseph, Mo., June 25. Mrs. Calvert was formerly a student in the college, and for two years taught in the Manhattan schools. Mr. Calvert superintended the college greenhouse last year, but is now in the floral business in Independence.

Mr. and Mrs. Calvert are at home at 917 West Main street, Independence.

we have had thousands, there have been but few in the past two years and none at present. We have never had a check raised nor a signature forged, and no depositor has suffered loss through our negligence. Furthermore, money deposited with us is absolutely safe, as our depositors are guaranteed by the depositors' guarantee fund of the state of Kansas."

DEATHS

ALTA ROBERTS

Miss Alta Roberts, '14, was killed in an accident at Milwaukee, Wis., June 30, when an excursion boat, Christopher Columbus, carrying more than 400 teachers and students of the University of Chicago, Northwestern university, and other institutions, collided with the east bank of the river and the bow of the steamer swung into one of the steel supports of a 25,000 gallon tank so that it toppled from its hundred foot tower and crashed upon the crowded decks of the pleasure boat.

Miss Roberts was evidently not in the immediate path of the falling steel tank for her body was not mutilated

not my own Alma Mater. I was there at commencement time. The University of Washington has a beautiful campus, some of it being the uncleared forest with great trees and paths and trails cut through. The grounds border on the lake, which is an additional advantage. I found it ideal canoeing on Lakes Washington and Union with no sand bars to watch for and beautiful scenery with the mountains in the distance.

I do hope that there are a few more issues of the paper that I will get, as it seems weeks since I've received one.

It is not necessary to say that I wish I could be back at Kansas State for commencement time, for it goes without saying.

Sincerely yours,

PAULINE CLARKE, '15.

814 Minor avenue, Seattle, Wash.

BACK TO ALMA MATER

(Concluded from Page One)

tan; Virgie G. Sherwood, Manhattan, English teacher in Lucas high school; W. E. Tomson, Manhattan; John H. Anderson, Topeka; Mollie (Eagles) Reppert, Washington, D. C.; Tina

economics teacher at Ellsworth; W. D. Cusic, Tecumseh; Nellie E. Reed, 203 Park Road, Manhattan, zoology department, Kansas State Agricultural college; Edith S. Glasscock, Kansas City, Kans.; Ethel (Roseberry) Grimes, Manhattan; Horace T. Wilkie, Topeka; Lorena Belle Taylor, Manhattan, teacher in Ohio; J. Mabel Brown, Ellsworth, domestic science teacher, Chase county high school; Jeanetta James, Joplin, Mo.; Lillian E. Lundberg, Manhattan; Mae (Clark) Mossneau, Eskridge; Nora S. Dahl, Montrose; Frank Kramer, Zeandale; George H. Railsback, Peabody, teacher in high school; Mae (Hildebrand) Lyness, New Richland, Minn.

Class of 1915—James W. Linn, Manhattan, dairy farmer; John V. Hepler, Manhattan, teacher; A. L. Ford, Manhattan, graduate student; Rembert Harshbarger, 730 Fremont street, Manhattan; Roy F. Hagans, Utica, general farmer in western Kansas; Helen D. Robinson, Holton; Eva (Pease) Kiser, Manhattan; Marie A. Boyle, Spivey; Charles A. Hunter, Gainesville, Florida, instructor in bacteriology and botany, University of Florida; Effie May Carp, Wichita,

Gilliard, Wichita; Fred B. Cromer, Manhattan; Robert E. Curtis, Manhattan; Hildegarde Harlan, Manhattan; Fern Faubion, Chokio, Minn.; Grace Rudy, Manhattan; Cora A. Pitman, Manhattan; Louise Witham, Manhattan; Nettie Hendrickson, Manhattan; Mary L. Taylor, Manhattan, teacher in mission in Kentucky mountains; Grace N. Cool, Glaser, teacher; Helen M. Pitcairn, Miltonvale, teacher; Mary Dunlap, Peabody, home economics teacher; Virginia Ann Layton, Blue Rapids; Phoebe Jane Lund, Manhattan; Claire B. Williams, Bigelow; Ethel Thorp, Nickerson; Clytie Ross, Halstead; Bertha Blanche Lauger, Lindsborg; Rudolph Stuewe, Alma; Rose V. Tipton, McPherson; O. E. Jones, Mankato.

Class of 1917—Lester R. Brooks, Winfield; Edward W. Harvey, New Brunswick, New Jersey, graduate student in New Jersey Agricultural college; Elsie Marshall, Manhattan; Harry W. Schaper, Mulvane; William F. Pickett, Manhattan; W. T. White, Bard, Cal., United States experiment station; Charles C. Brown, Ellsworth; Carl D. Hultgrin, Topeka; L. A. Zimmerman; Belle Plaine; J. H. Cush-

Are Now Administering Kansas Institutions



GOVERNOR ARTHUR CAPPER



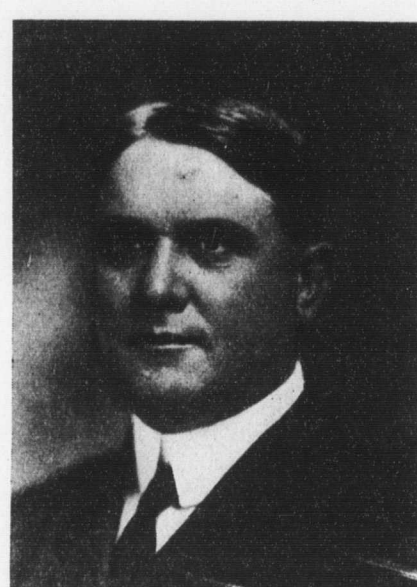
DR. WILBUR N. MASON



EDWARD W. HOCH



CHARLES W. GREEN



JAMES A. KIMBALL, BUSINESS MANAGER

MAJOR HARBORD'S RECORD

Major James J. Harbord, '86, is the subject of one of the sketches syndicated by a press association under the general title, "Our Fighting Men."

The sketch reads as follows:

"Major James J. Harbord, U. S. A., chief of staff under General Pershing, in France, is a notable example of the army officer who has risen from the ranks. Major Harbord began his military career in 1889 as a private in the Fourth infantry. In the war with Spain he served as major of the Second United States cavalry. After participating in the Cuban campaign he was assigned to the Philippines, where he made an admirable record, especially in the work of organizing the native constabulary and scouts. Major Harbord is 50 years old and is a native of Illinois. He graduated from the infantry and cavalry school in 1895."

MODERN BANKING

C. J. Burson, '01, is cashier of the State Bank of Hewins. Mr. Burson, who worked his way through college, starting in the horticulture department, is carrying on the business of the bank along modern lines. In a recent letter to customers, he wrote:

"One phenomenal record we hold, and of which we are exceedingly proud, is that during our existence we have never lost a loan nor a dollar of a loan, and no loan is 30 days past due. Our customers should feel as highly complimented on this account as we are grateful, as it indicates that our customers are of the best and strictly honorable, honest, and upright. You will have to look a long time before you will find a community that has paid such a high compliment to its bank.

"We have never cashed a check on which we were unable to collect or recover payment. We have never lost a dollar by overdraft, and although

in any way, The thousands of gallons of water, loosed by the bursting tank, flooded the deck. Many passengers, seeing the rush of water, thought that the boat was sinking and leaped into the river. It is to be surmised that Miss Roberts leaped from the deck after the disaster and was unable to swim until rescued. Her body was picked up by a rescue boat shortly after the disaster. All efforts to resuscitate her were without avail. Fourteen others were killed and a much larger number received serious injuries.

Miss Roberts was in attendance at the University of Chicago for the summer session after completing a successful year of teaching in Iowa where she had been employed for next year at an increase in salary. Her home is in Morrill, Kan. She had expressed her intention, two days previous to her death, of spending a week with friends at Manhattan after the close of the summer session.

FROM A SEATTLE ALUMNA

To the Alumni Editor of THE INDUSTRIALIST:

Again I am asking you to change the address of THE INDUSTRIALIST. Surely I have not received the last copy of this year? I miss every copy that does not come and am always so glad to see the paper, for through it I get much news that my friends forget to write to me.

I have taken up my new work and am well started on my second week. It is that of head dietitian of the Swedish hospital, one of the largest hospitals of Seattle, and besides the work of dietitian, I also do the ordering for the whole house. The work is hard but I find it very interesting, much different, and better paying than teaching school.

I spent most of my vacation at the University of Washington visiting friends, and it seemed so good to get back to college life even though it was

Andrews, Norcatur; M. Eva Linn, Manhattan; Selma E. Nelson, Manhattan; E. A. Ortlund, Clyde, farmer; D. M. Purdy, Manhattan; B. F. Hildebrandt, North Kansas City, Mo.; J. H. Goheen, 108 S. Juliette, Manhattan.

Class of 1913—Florence Carvin, Wichita, teacher; H. L. Kent, Manhattan, department of education and school of agriculture, Kansas State Agricultural college; Kathryn Zipse, Jewell; Lyda (Stoddard) Turner, Amherst, Mass.; Ether (Turner) Pierce, Kansas City, Kan.; W. A. Buck, 1419 Laramie street, Manhattan, assistant, Kansas State Agricultural college; R. E. Wiseman, Manhattan, Kansas State Agricultural college; R. K. Bonnett, Manhattan; Adele Conrow, Manhattan; L. W. Rexroad, Kansas City, Mo., assistant bridge engineer, Kansas City Southern Railway; J. A. Nicolay, 3923 Oak St., Kansas City, Mo., civil engineer, interstate commerce commission; Lynne Hilsabeck, Manhattan, teacher; W. E. Grimes, Manhattan, assistant professor of farm management, Kansas State Agricultural college; D. W. Ziegler, extension division, Kansas State Agricultural college; D. Wiley Brown, Ellsworth, teacher; Ira E. Taylor, Manhattan; William O. Hayes, Manhattan; J. A. Vohringer, Hutchinson; Ramona (Norton) Phillips, Manhattan; Ida Alfreda Carlson, Zeandale; Hattie Abbott, Manhattan; M. F. Ahearn, Manhattan; Helen E. Rannels, Manhattan.

Class of 1914—Melvin E. Hartzler, Flagler, Colo., farmer; Mary (McNamara) Nicolay, 3923 Oak street, Kansas City, Mo.; Bessie L. Sheaf, 738 Washington boulevard, Kansas City, Mo.; Ethel (Marshall) Anderson, 1207 Tyler street, Topeka; Margaret E. Moore, Manhattan; Elizabeth Cox, Iowa Falls, Iowa; Ruth Gilbert Burns, 641 Washington street, New York City; Clara A. Deaver, Sabetha; Katherine Adams, Manhattan, home

Spearville, home economics teacher; Lorenzo B. Mann, University of Kentucky, Lexington, Ky.; F. W. Johnson, Downs, teacher; J. D. Hungerford, State College, New Mexico, nutrition chemist; Paul R. King, Potwin; Evelyn M. Potter, Barnes, home economics at Agenda; A. E. McClymonds, Caney, agronomist for smelter; William A. Lathrop, Berwyn, Ill.; Mabel Bennett, Manhattan; Katherine Munger, Manhattan; Ruth Aiman, Faribault, Minn., home economics teacher; Elsie (Blaylock) Hill, Smith Center, Ruth Nygren, Topeka; Edythe Groome, Manhattan; Z. H. McDonald, Goff.

Class of 1916—Ruth Adams, Manhattan, teacher; Frances Ewalt, 526 North Fourteenth street, Manhattan; Franc Sweet, 1125 Poyntz avenue, Manhattan; Verda Harris, College Heights, Manhattan; Florence Justin, 1507 West Seventeenth street, Sioux City, Iowa; Mary Louise Price, Winfield, Iowa; Ralph V. A. Neil, Wells-ville, Kan., grain and live stock farmer; Jay L. Lush, assistant in animal husbandry department, Kansas State Agricultural college; Elliot Ranney, assistant paymaster, United States navy; Hazel K. Groff, Nortonville; Meta Sheaf, Kansas City, Kan.; Lillian A. Lathrop, Manhattan, teacher; Hannah M. Campbell, Attica; L. R. Alt, Nortome, Md., teacher; Jay Stratton, Mulvane, orchard manager for Central States Orchard company; Doddridge C. Tate, Western Electric company, Chicago, Ill., equipment engineer; Isla Bruce, Marquette, teacher in home economics, Oskaloosa; Bess (Hildreth) Hunter, Gainesville, Florida; Guy C. Smith, Great Bend; F. S. Hagy, Manhattan, extension department; K. A. Ching, Manhattan, graduate student; Alfred Carroll Apitz, Manhattan; R. E. Lofinck, Manhattan, teacher; Cecil Elder, Manhattan, assistant pathologist, Kansas State Agricultural college; Paul Robinson, Eskridge; P. C. Mc-

man, Emporia; Mabel Root, Centralia; Wilbur W. Wright, Newton; Rose Baker, Topeka; Robert Osborn, 301 South Estelle street, Wichita; Florence Evans; F. E. Dowling, Manhattan; Loren L. Lupfer, Larned; S. R. Gardner, Hartford; H. W. Snell, Douglas; Anna Howard, Hutchinson; Faye Wright, Muskogee, Okla.; Lillian McCarty, Iola; Alfred C. Nelson, Paola; Blain Crow, Manhattan; Laura Ramsey, 925 Morris avenue, Topeka; Myrtle E. Bauerfind, Minneapolis; A. O. Grandfield, Margis, teacher; Frances Hildebrandt, Strond, Okla., tea room; Inez E. Kent, Franklin, Nebraska; Teresa Goodwyn, Minneapolis; Merle Beeman, 1401 Fillmore street, Topeka; Bess Hoffman, Enterprise; Helen Payne, Greeley, Colo., teacher; H. J. Adams, assistant county agent; L. E. Howard, Coldwater; I. G. Freeman, Ellsworth, farmer and stockman; J. R. Neale, Manhattan, farmer; L. M. Mason, Belle Plain, farmer and fruit grower; Charlotte B. Hall, Manhattan; J. L. Lantow, Lyons; A. R. Newkirk, Geneseo, farmer and stockman; Amy Lamber-son, Lyons; Leila M. Kent, Franklin, Nebraska; Mary Weible, Topeka, teacher; J. B. Sweet, Manhattan, assistant in experimental breeding, University of Wisconsin; Madge Thompson, Gooding, Ida.; Zora Harris, Manhattan; May Brookshire, Chillicothe, Mo.; Vilona Cutler, Anthony, bacteriologist, department of agriculture; R. B. Keys, Winchester, farmer; Charles R. Adamson, Erie; Carl F. Huffman, Tonganoxie, teacher; Cecil L. McFadden, Stafford, farmer; Ruth Daum, Eureka; Stella Blain, Lamar; Rose Farquhar, Coin, Iowa; Vera A. McCoy, Imperial, Nebr.; Josephine Allis, Manhattan; Alma Pile, Liberal; Neil Boyle, Spivey; Eunice Ann Baird, Cherryvale; Mary M. Baird, Rural Route 2, Cherryvale; Anna M. Neer, Cambridge; Mabel Hinds, Pleasanton; Dorothy Heartburg, Manhattan; Mabel Hunter, Manhattan.